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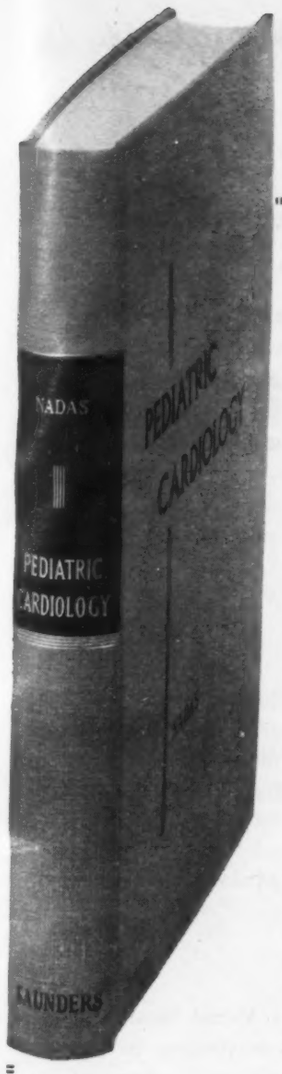

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In 1952, a CIBA research team identified Serpasil, an alkaloid from the whole root of an Indian shrub called *Rauwolfia serpentina* and in so doing ushered in a new era in therapy.

In the ensuing years Serpasil has withstood the scrutiny of thousands of physicians. This is evidence of its wide-range therapeutic effectiveness and safety.

Very extensive clinical trials preceded the introduction of Serpasil. Since then, it has been used to treat millions of patients, and as a consequence, we now know even more about its unique therapeutic properties. Here are some of the things we know that have real significance for you and your patients:

In hypertension, we know that Serpasil, as a general rule, has the ability to lower blood pressure gradually, consistently and uniformly. In addition, it has proved *well-tolerated* and *dependable* and is today considered by most physicians a drug of choice in hypertension — used either alone, or as a "priming" agent or as a background drug for more potent antihypertensive agents.

In emotional disorders, we know that Serpasil, with its notable tranquilizing property (which seems to be pharmacologically distinct from its antihypertensive action), has been found effective in dispelling anxiety, tension and nervousness as well as in calming seriously disturbed psychiatric patients. *It should be noted that we do not recommend Serpasil as a palliative for the ordinary worries and cares that are normal to—and perhaps necessary to—the healthy human organism. We do recommend Serpasil for the patient who suffers from intolerable anxiety and tension that impair his day-to-day functioning.*

In tachycardia, we know that Serpasil has a beneficial heart-slowing property that is quite distinct from its antihypertensive and calming action.

In alcoholism, we know, from the studies of competent investigators, that oral Serpasil relieves the tensions that precipitate bouts of drinking — and that parenteral Serpasil dramatically and swiftly controls delirium tremens, without the habituating or soporific dangers of previously used drugs.

We know that there are other important indications for Serpasil: In parenteral form it has life-saving value in **hypertensive emergencies,** alone or in combination with more potent agents; the parenteral form also calms **acutely disturbed psychotic patients** so effectively that they can be hospitalized quietly without causing the family undue distress or disturbing the doctor-patient relationship; other studies have shown that **confused geriatric patients, disturbed adolescents** and periodically tense **premenstrual patients** benefit from the calming action of Serpasil.

Still more indications could be added to this list — and the list is still growing.

There are other phases of Serpasil therapy which have gradually come into clearer focus and perspective — and which deserve prominent mention. Most important, we have learned a great deal about its side effects.

What We Know About Side Effects

During the past 5 years the side effects of Serpasil, as well as its therapeutic properties, have been under continual study, much of it supported by CIBA as its pioneer investigator and discoverer. What we have learned is neither surprising nor alarming. *All* medications with any appreciable degree of therapeutic activity cause side reactions, and Serpasil, like all other rauwolfia preparations, is no exception. What is significant is that although millions of patients have taken Serpasil, statistically very few *serious* side reactions have been reported. There have been no cases of blood dyscrasia, liver damage, addiction or withdrawal symptoms. The most common side effects of Serpasil are nasal congestion, lethargy or lassitude and increased frequency of defecation and/or looseness of stools. When necessary, these effects can almost always be controlled with adjunctive medication.

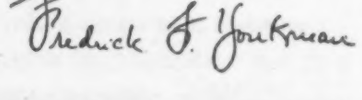
The Matter of Depression

Mental depression — that is, true, endogenous mental depression — has developed in a very small percentage of patients treated with Serpasil and other rauwolfia preparations. After thorough investigation we have established these facts about so-called rauwolfia-induced depression: (1) In many cases, transient mood changes and physical fatigue (experienced by almost everyone in the general population) have been mistakenly identified as depression. (2) In a recent personal interview survey of 100 physicians, chosen either at random or because of their extensive experience with Serpasil, the incidence of true depression in 21,485 patients proved to be an infinitesimal 0.023 per cent. (3) In the few cases where mental depression has actually occurred there is considerable question as to whether or not it was a direct effect of rauwolfia. Mayo Clinic investigators[1] report that rauwolfia *per se* does not cause depression, but rather that it unmasks an underlying susceptibility to depressive reactions. Kinross-Wright[2] states: "It is likely that depression will occur only in a predisposed individual or in one who is already mildly depressed." H. DeKruif[3] comments: "I do not think that Serpasil is the primary cause of . . . [melancholic] depressions but rather that it initiates a depressive reaction in some people who are susceptible to such; for example, people who have a good pattern for involutional melancholia. These experiences have not in the least lessened my enthusiasm for Rauwolfia and I am using it as a basic drug for almost all my hypertensives, as well as in some anxiety states." Ayd,[4] in a very recent paper, notes: "That this drug may cause depression is uncertain. After reviewing a large number of so-called drug-induced depressions it appears that in some cases what was called depression was excessive tranquilization while in the rest, the patients were depressed before the drug was started, and what the drug did was make the depression more apparent."

All things considered, when patients are properly selected and the lowest effective maintenance dose is established, the physician can prescribe Serpasil confidently, with little fear of untoward reactions.

A Summing Up

Looking back on 5 years of Serpasil, we at CIBA are glad to have contributed one of the safest, least toxic and most widely applicable therapeutic agents in general practice. Looking ahead, we see years in which the benefits of Serpasil will be extended to an even greater number of patients. This is a great satisfaction.



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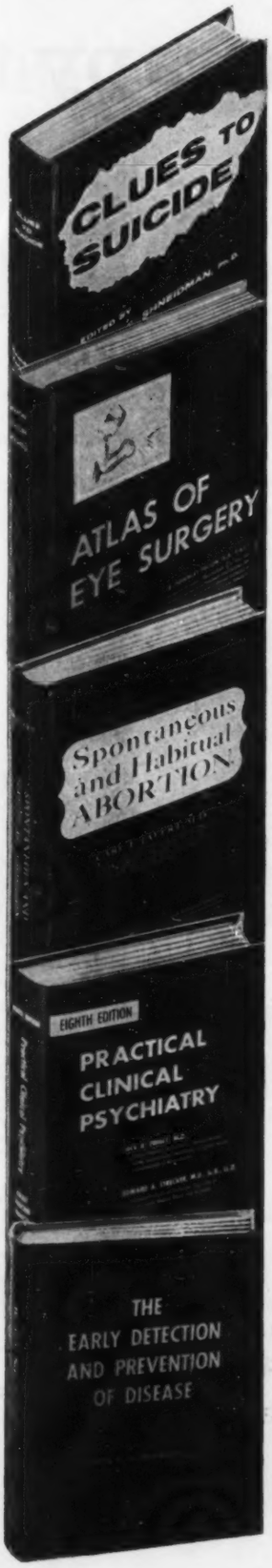

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Edited by Edwin S. Shneidman, Ph.D., and Norman L. Farberow, Ph.D., with a foreword by Karl A. Menninger, M.D.

☐ WRITTEN by Doctors Schneidman and Farberow, with 17 other contributors. This book presents some of the most recent theoretical and practical efforts in meeting the problem of suicide—one of the ten most common killers. In his foreword, Dr. Karl A. Menninger states, "Once every minute, or even more often, someone in the United States either kills himself or tries to kill himself . . ." CLUES TO SUICIDE was written to help the scientist in human behavior understand, predict, and prevent one of the most serious socio-psychological phenomena. A unique feature of the book is the appendix which consists of 33 *genuine suicide notes* matched (by sex, age, and occupation) with 33 simulated notes from non-suicidal individuals. 215 pp., 6 x 9, $5.50.

Paton, Katzin, Stilwell . . . Atlas of Eye Surgery

By R. Townley Paton, M.D., F.A.C.S., and Herbert M. Katzin, M.D., F.A.C.S., with illustrations by Daisy Stilwell.

☐ THE visual approach is maintained on every page in this new atlas through 464 line drawings, *unmatched for accuracy* and fine detail which illustrate step-by-step procedures. Of particular note is the fact that all of the illustrations are drawn from the viewing position of the operating surgeon and thus show all procedures as he sees them from the position he must take during the operation. The text is brief, summarizing only information which cannot be illustrated, and is confined mostly to legends for the drawings. 248 pp., 464 illus., 8¼ x 11, $15.00.

Javert . . . Spontaneous and Habitual Abortion

By Carl T. Javert, M.D.

☐ A detailed analysis of 2,000 spontaneous abortion specimens from the clinical obstetric, and pathologic points of view. The author's findings indicate that cord complications *cause more abortions* than the pathologic ovo-fetus (53% as against 35%)—and prove the importance of placenta previa as a common cause of abortion. The analysis stresses the high incidence of decidual hemorrhage in the abortion material (61% as against 3.5% in total pregnancies). The author shows how anti-hemorrhagic vitamins C, P, and K act to prevent decidual hemorrhage and consequently spontaneous abortions. Psychosomatic and phantom abortion are thoroughly discussed and the psychosomatic therapy is described in detail. SPONTANEOUS AND HABITUAL ABORTION brings a wealth of *new information* to the specialist and the family physician. 450 pp., 196 illus., 6 x 9, $11.00.

Ewalt, Strecker, Ebaugh
Practical Clinical Psychiatry, 8th Ed.

By Jack R. Ewalt, M.D.; Edward A. Strecker, M.D., Sc.D., LL.D.; and Franklin G. Ebaugh, M.D.

☐ THE *thoroughly revised* edition of a *highly successful text* for general practitioners, and physicians beginning their training in psychiary. With 36 chapters instead of the former 15, this new edition includes the general causes, symptoms, and treatment of the common mental disorders, and is written to aid the general physician to further understand and study patients they see in the clinic, on the hospital wards, and in private offices. 441 pp., illus., 6 x 9, $8.00.

Hubbard
The Early Detection and Prevention of Disease

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☐ THIS volume represents a departure from the usual in that it deals *extensively* with the relation of preventive medicine to the clinical practice of medicine, rather than intensively with the several aspects of a single disease or a single physiologic system. 348 pp., 6 x 9, $7.50.

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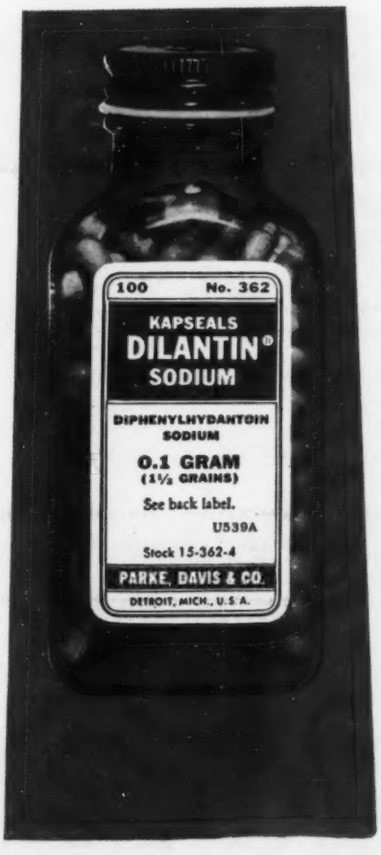

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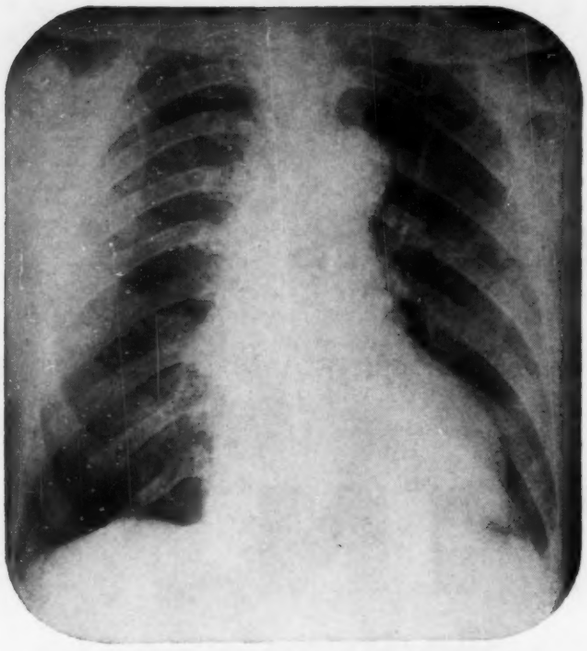

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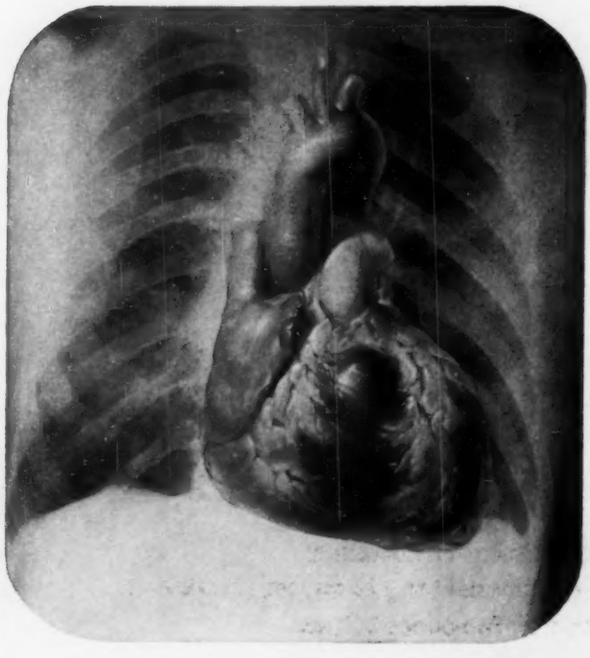
Taken from White Laboratories' Technical Exhibit, American Medical Association, 105th Annual Meeting, Chicago, June 11-15, 1956.



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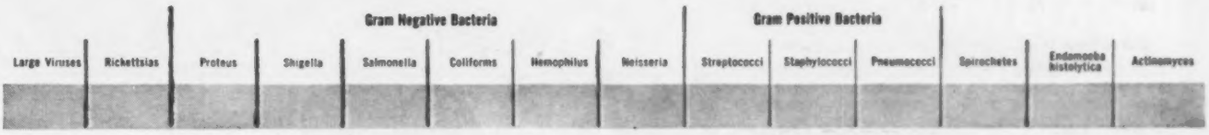

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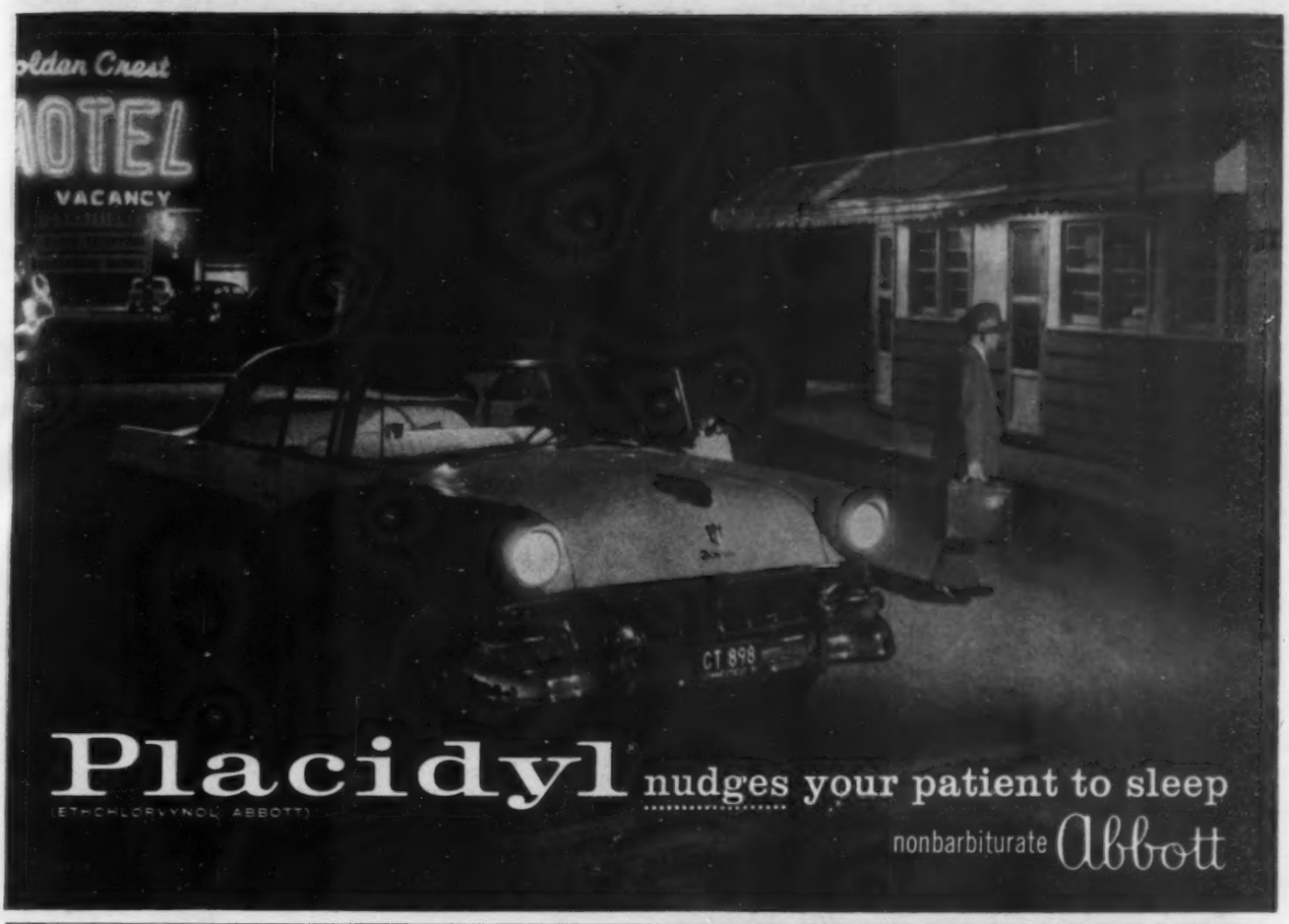

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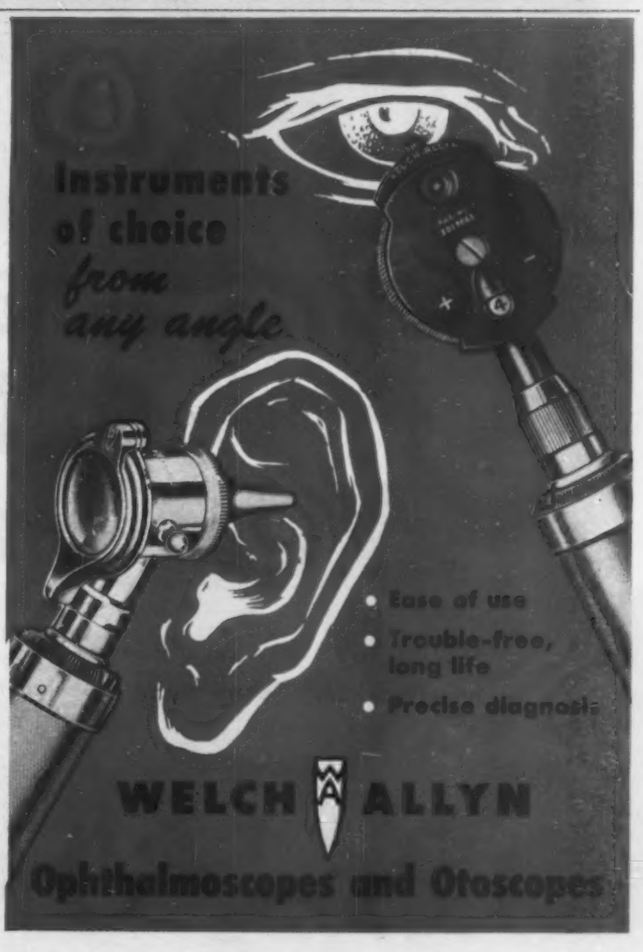

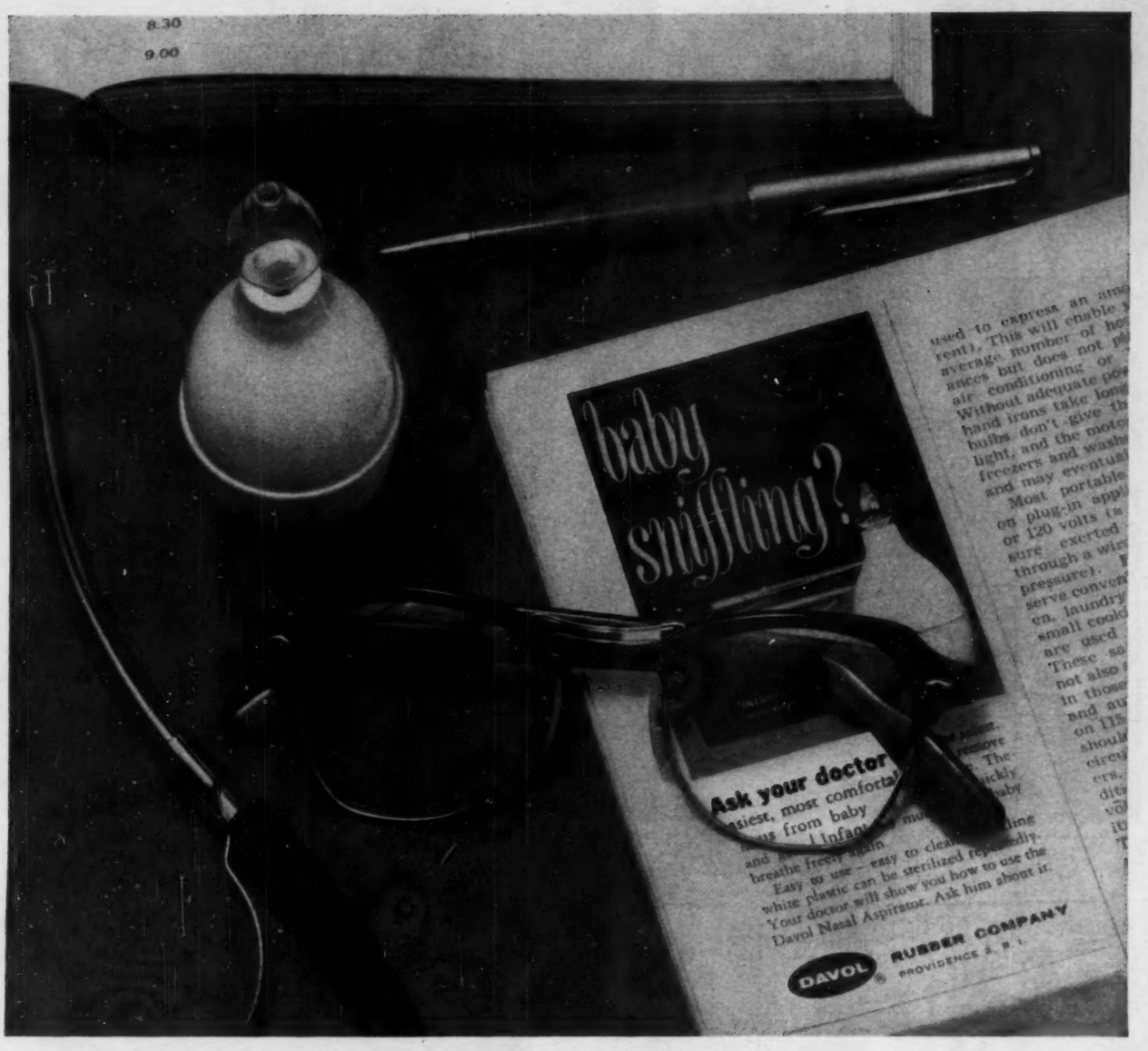

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*DESSERT C	102	2.4	3.2	16.5	75	69	228	0.110
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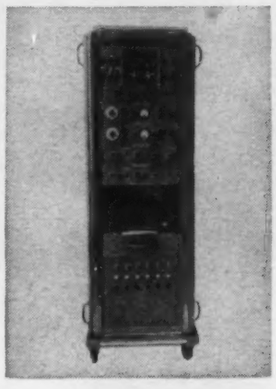

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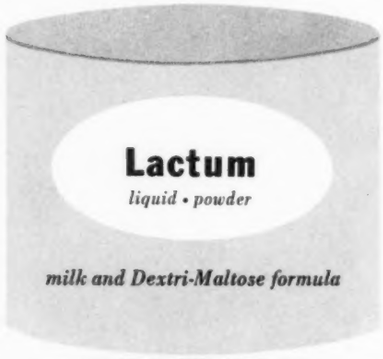
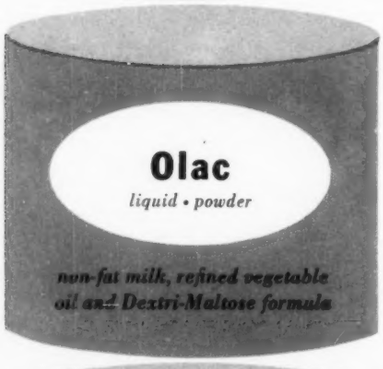
THE MEAD JOHNSON FORMULA PRODUCTS FAMILY **FOR EVERY INFANT FEEDING NEED**

for routine infant feeding ▼





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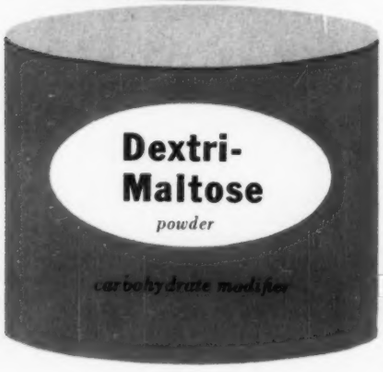

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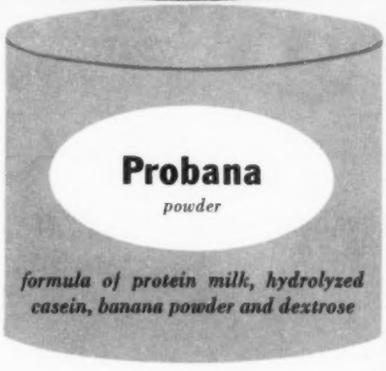

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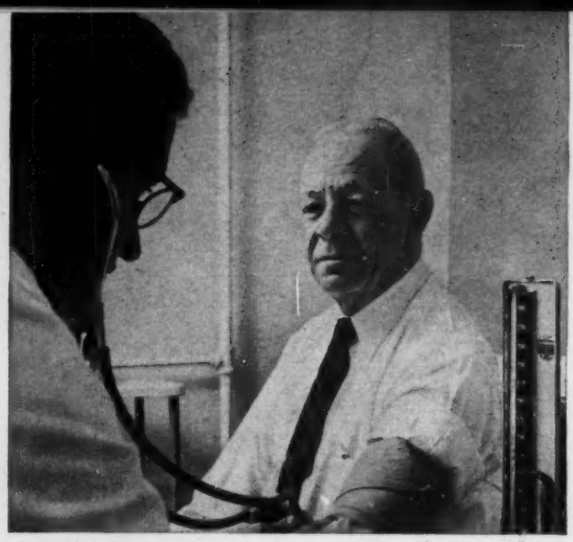

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COMBINATION TABLETS

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« Washington News »

Congress Is Looking into Weight-Reducing Pills • •
Scientists Exchange Views on Food Additives • •
PHS Outlines Program to Combat Asian Influenza • •
Special PHS Consultant for Radiation Problems • •

INVESTIGATION OF WEIGHT-REDUCING PILLS

Its investigation of filter cigarettes completed, the Blatnik House subcommittee now is looking into what it describes as "false and misleading advertising" on behalf of weight-reducing pills or devices.

Chairman John Blatnik (D., Minn.) has the same objective as in the first inquiry—to establish that the advertising claims are false and misleading, then to learn what the Federal Trade Commission is doing about the situation.

Among technical witnesses was Dr. S. William Kalb of Newark, N. J., who was described by Mr. Blatnik as having done outstanding work in the treatment of obesity and having done experimental work on the usefulness of drugs in weight reducing.

Dr. Kalb emphasized that with most people the only way weight can be reduced is by reducing the caloric intake to the point where less is being eaten than the body is using up. He said the various advertised pills do no more than serve as a "crutch" to encourage the patients.

He told the subcommittee that all persons going on a diet should have physical examinations first, so physicians can adjust the diets to the particular medication being given and to the patients' specific needs. He noted that, in the presence of certain organic conditions, some of the products on the market could produce a deleterious effect.

As a solution, Dr. Kalb suggested that the weight-reducing products be taken from the list of drugs for sale "over the counter," and limited to doctors' prescriptions. The result, he said, would be little or no sale, as few physicians would prescribe them.

In opening the hearing, Representative Blatnik declared:

"The Postmaster General has reported that 'dietless reducing schemes' are the most widely promoted medical fraud today.

"Information . . . from authoritative medical sources states that weight cannot be reduced without decreasing food intake and that drugs at best are a 'crutch' to aid in adhering to a diet. The Postmaster General has estimated that weight reducing promotions through the mails currently under investigation, are grossing between two and three million dollars a year. These mail order promotions appear to be but a small fraction of the sales of similar preparations sold over the counter of drug stores.

"A spot check by the committee staff indicates that sales of these preparations in the Washington area alone were about $1 million in the last 12 months. The national advertising budget for one of these preparations in 1955 exceeded $1 million.

"The medical profession has warned the public of the serious danger to health of excess weight. Also, the slim figure is fashionable and much desired, especially by the ladies. These two facts combined have created a vast market for preparations which claim that losing weight is easy, particularly when they assure the buyer that he can continue to eat the food he loves and need never go hungry."

PANEL OF SCIENTISTS DISCUSSES FOOD ADDITIVES PROBLEMS

In two days of discussion, a panel of 15 scientists has explored the problems of chemical additives to foods for the benefit of the health subcommittee of the House Committee on Interstate and Foreign Commerce. The objective was to develop all the facts possible to aid the committee in its decision on a number of bills aimed at putting various federal safeguards around food additives.

The chairman was Dr. William J. Darby, head of the department of biochemistry and director of the nutrition department of the Vanderbilt School of Medicine. He is a member of the A. M. A.'s Council on Foods and Nutrition and chairman of the food protection committee of the National Academy of Sciences' food and nutrition board.

At the opening of the hearing, Chairman John Bell Williams (D., Miss.) pointed out that the scientists had come to Washington at their own expense to help the congressmen "get a clearer picture of the problems involved." Dr. Darby explained that the panel would take up the scientific aspects, "apart from the legal and political considerations" involved in the legislation.

Under the panel procedure, the scientists made separate opening statements, then discussed problems among themselves, and finally invited questions from members of the subcommittee.

Dr. Emil M. Mrak of the University of California Agricultural Experiment Station described the historical background for additives, which (*a*) improve *the* flavor, color, texture of foods or add to their convenience for the consumer or (*b*) help the manufacturer to keep the product nutritious, to better preserve it, to reduce its price, or to make it safe for consumption.

Growth of urban communities, according to Harvey K. Murer of General Foods, was one of the factors that stimulated use of additives. He noted that high concentrations of population in cities makes it essential that modern technology guarantee a safe, steady, uniform supply of nutritious foods. "Even if the additives do not supply additional nutrition or vitamins," he said, "they accomplish something if they get the foods to the public in good condition and in a form that the people will buy." In processing of foods, he said "we have no right to differentiate between natural chemicals and chemical additives." He and other witnesses emphasized that the country "cannot afford to stifle scientific progress in food research" by standardizing testing procedures.

Dr. F. N. Peters of the Quaker Oats Company said that "what nature does does not always result in perfection." As a consequence, food researchers actually are constantly attempting to improve on nature. He mentioned that from ancient times "additives" have been used, such as salt, spices, smoke, pectin.

When chairman Williams asked the panel if any additives were being used "that have no functional value," Dr. John H. Foulger said no, that chemical additives were expensive and that if they didn't serve a specific purpose they would not be introduced. Dr. Foulger is from E. I. du Pont de Nemours & Co.

From the Washington Office of the American Medical Association.

Dr. W. C. Hueper of the National Cancer Institute raised the question of appetite. Others on the panel pointed out that, if foods do not appeal to the buyer, they will not be eaten. Dr. Mrak added that food "has to be something more than a mass."

In discussing safety of foods containing additives, members of the panel made these points:

1. Every chemical additive is different and has its own particular problems and tests for each may differ; "safety" and "toxicity" both are relative.
2. Chemists in the food industry make their recommendations only after careful testing steps, some of which were described.
3. Scientists in food fields constantly are examining and reexamining their techniques, "accepting their responsibility and giving more and more thought to it."

Dr. Foulger told of a survey he had made of 50,000 workers over a period of 17 years. All are du Pont employees, therefore in general exposed to far more chemical hazards than the general population. But, because they also are a part of the general population that is exposed to any possible dangers from food additives, they are taking a "double risk."

Yet, said Dr. Foulger, their rate of illness per year has constantly decreased, except when the special wartime factors caused a rise. If these people's health is not being affected by the combination of food additives and on-the-job chemical exposure, he questioned whether there was any great risk from food additives.

PHS SIGNS CONSULTANT ON RADIATION DANGERS

The Public Health Service has signed up a special consultant on the public health aspects of radiation. He is Dr. Russell H. Morgan, radiologist-in-chief at Johns Hopkins University Hospital. He is a former associate professor of radiology at the University of Chicago, and, during World War II, he was chief of the radiology section, tuberculosis control division, of UHS.

Dr. Morgan will be principal advisor to the surgeon general and his staff in the development of the PHS radiological health program. This program is concerned with protecting the population from harmful effects of radiation from various sources. He likewise will assist the surgeon general in coordinating PHS activities in research, epidemiologic studies, environmental monitoring and technical assistance to the states.

Dr. Morgan also has been professor of radiology at Johns Hopkins University and counts over 20 years of intensive training in the field of radiology.

100,000 GET OASI DISABILITY PAYMENTS

More than 100,000 workers have qualified for disability payments under the Old Age and Survivors' Insurance Program and are receiving their first checks this month. The program was voted by Congress last year, but was not put into effect until last July 1.

To qualify, a person must be between 50 and 65 years of age and be suffering from a disability that prevents him from engaging in substantial activity. After age 65, he is eligible for regular OASI retirement pay, for which no disability certification is required.

Disabled workers whose claims are approved will be paid for all of 1957, providing they apply before the end of the year. After Jan. 1, 1958, payment will not be made for any month prior to filing of the claim.

PHS STATEMENT ON ASIAN INFLUENZA

Epidemics of Asian influenza are a "definite probability" in the United States next winter, according to Surgeon General Burney of the Public Health Service. Dr. Burney made this appraisal of the situation at a news conference following release by PHS of a summary of all the known facts on the disease.

Most areas of the United States probably have been exposed by now, he said, and there have been 11,000 reported cases but with only three deaths, a rate far lower than prevailed in the Far East epidemics. "Past experience suggests the disease may suddenly begin to spread quite rapidly in the fall or winter," the surgeon general said.

To combat the disease, six manufacturers are stepping up their rate of production of a newly developed vaccine and are working toward a goal of 60,000 cc. by February. The PHS, noting that this will be only about a third enough to give everyone protection, recommended that priority in treatment be given those "whose services are imperative for the care of the sick and those needed to maintain other essential functions."

A week before Dr. Burney disclosed these details, the American Medical Association announced it was starting a nationwide campaign to (*a*) inform all physicians on how to deal with Asian influenza, (*b*) encourage preparation by state and local societies of stand-by plans for use in epidemics, and (*c*) coordinate physicians' programs with public health agencies and health departments.

Dr. Harold C. Lueth is chairman of the special committee appointed by the Board of Trustees to direct the A. M. A. campaign.

Dr. Burney said the Department of Health, Education, and Welfare does not plan to ask legislation to allocate the vaccine, preferring to let it be handled through the usual channels. The precise cost of the vaccine has not been set, but the A. M. A. and the State and Territorial Health Officers Association have given PHS assurances that no one will be denied protection because of inability to pay.

The vaccine remains potent for about 18 months. A single injection is about 70% effective. Protection develops in 10 to 14 days and lasts about a year, according to the PHS.

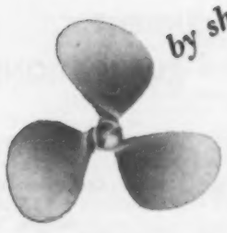
So far temperatures have been 102 to 104 F (38.9 to 40 C), accompanied by headache, sore throat, cough, and muscle aches. The fever continues for three to five days, followed by weakness for several more days.

The following companies have been licensed to produce the vaccine: Eli Lilly & Company, Indianapolis; Lederle Laboratories, New York City; Merck Sharp & Dohme, Philadelphia; National Drug Company, Philadelphia; Parke, Davis & Company, Detroit; and Pitman-Moore Company, Indianapolis.

MISCELLANY

A technical bulletin from the Federal Civil Defense Administration carries charts showing the percentage probability of fall-out during the first 12 hours following the detonation of a nuclear weapon. Charts, based on a U. S. Weather Bureau survey of winds, are designed as an aid to civil defense planning.

During the latest week of record, the Public Health Service released 3,511,575 doses of Salk poliomyelitis vaccine, making a total of 55,600,000 doses produced and released since Jan. 1. Latest data indicate 10,500,000 doses in the hands of manufacturers, druggists, physicians, and health officers.

IN ANY KIND OF MOTION SICKNESS 

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Lederer, L. G., and Kidera, G. J.: Passenger Comfort in Commercial Air Travel with Reference to Motion Sickness, Internat. Rec. Med. *167*:661 (Dec.) 1954.

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two reasons
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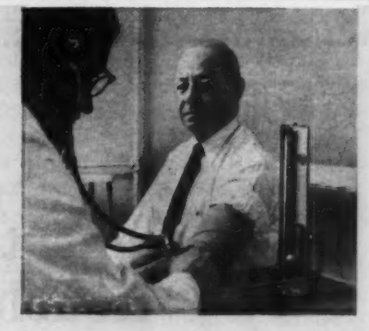
practice



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1. Coan, J. P., McAlpine, J. C., and Boone, J. A.: J. South Carolina M. A. 51:417 (Dec.) 1955.

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SOCIETY	PRESIDENT	SECRETARY	MEETING
AMERICAN MEDICAL ASSOCIATION	David B. Allman, Atlantic City, N. J.	George F. Lull, 535 N. Dearborn St., Chicago 10	San Francisco, June 23-27
			Philadelphia, Dec. 3-6
Aero Medical Association	Ashton Graybiel, Warrington, Fla.	T. H. Sutherland, P. O. Box 26, Marion, Ohio	Washington, D. C., March 23-26
American			
Academy for Cerebral Palsy	Nicholson J. Eastman, Baltimore, Md.	Ray Rembolt, Iowa Hospital-School, Iowa City, Ia.	
Academy of Allergy	Carl E. Arbesman, Buffalo, N. Y.	Francis C. Lowell, 65 E. Newton St., Boston	Philadelphia, Feb. 3-5
Academy of Dermatology & Syphilology	Nelson P. Anderson, Los Angeles	James R. Webster, 55 E. Washington St., Chicago 2	Chicago, Dec. 7-12
Academy of General Practice	J. S. DeTar, Milan, Mich.	Mr. Mac F. Cahal, Volker Blvd., Kansas City 12, Mo.	
Academy of Neurology	Francis M. Forster, Washington 7, D. C.	Joseph M. Foley, Boston City Hosp., Boston	Philadelphia, Apr. 21-26
Academy of Occupational Medicine	I. R. Tabershaw, White Plains, N. Y.	Leonard J. Goldwater, 600 W. 168th St., New York 32	New York, Feb. 12-14
Academy of Ophth. & Otolaryn.	Erling W. Hansen, Minneapolis	W. L. Benedict, 100 First Avenue Bldg., Rochester, Minn.	Chicago, Oct. 13-18
Academy of Orthopaedic Surgeons	Frederic C. Bost, San Francisco	Mr. John K. Hart, 116 S. Michigan Ave., Chicago 3	Chicago, Oct. 7-10
Academy of Pediatrics	E. E. Martmer, Grosse Pointe 30, Mich.	E. H. Christopherson, 1801 Hinman Ave., Evanston, Ill.	New York, Feb. 1-6
Academy of Tuberculosis Physicians	Louis M. Barber, Murphys, Calif.	Oscar S. Levin, P. O. Box 7011, Denver 6, Colo.	Chicago, Oct. 7-10
Assn. for the Study of Neoplastic Diseases	Roscoe W. Teahan, Philadelphia	Bruce H. Sisler, P. O. Box 268, Gatlinburg, Tenn.	San Francisco, June 21
Assn. for the Surgery of Trauma	Charles G. Johnston, Detroit	James K. Stack, 700 N. Michigan Blvd., Chicago 11	
Assn. for Thoracic Surgery	Brian Blades, Washington, D. C.	Hiram T. Langston, 600 S. Kingshighway, St. Louis 10, Mo.	Hot Springs, Va., Oct. 31-Nov. 2
Assn. of Anatomists	Barry J. Anson, Chicago 11	L. B. Flexner, Univ. of Pa. School of Med., Philadelphia 4	Boston, May 16-18
Assn. of Blood Banks	E. E. Muirhead, Dallas, Texas	Miss Marjorie Saunders, 3707 Gaston Ave., Dallas 10	Buffalo, Apr. 2-4
Assn. of Genito-Urinary Surgeons	George F. Cahill, New York	William J. Engel, 2 East 54th St., New York 22	Chicago, Nov. 4-6
Assn. of Immunologists	John H. Dingle, Cleveland 6	F. S. Cheever, U. of Pitt., Grad. School of Med., Pittsburgh 13	Edgewater Park, Miss., Apr. 23-25
			Philadelphia, Apr. 14-18
Assn. of Medical Clinics	G. Gordon McHardy, New Orleans	Harold D. Caylor, Caylor-Nickel Clinic, Bluffton, Ind.	Kansas City, Mo., Oct. 23-25
Assn. of Neuropathologists	Ben Lichtenstein, Chicago	Leon Roizin, 722 W. 168th St., New York 32	
Assn. of Obstetricians & Gynecologists	F. Bayard Carter, Durham, N. C.	E. Stewart Taylor, 4200 East 9th Ave., Denver 20	Hot Springs, Va., Sept. 5-7
Assn. of Pathologists & Bacteriologists	Granville A. Bennett, Chicago	Russell L. Holman, 1542 Tulane Ave., New Orleans 12, La.	
Assn. of Railway Surgeons	Ernest Ceili, New Orleans, La.	Chester C. Guy, 5800 Stony Island Ave., Chicago 37	Chicago, Apr. 17-19
Assn. of the History of Medicine	Benjamin Spector, Boston 11	John B. Blake, Smithsonian Institution, Washington 25, D. C.	New York,
Assn. of Mental Deficiency	Arthur E. Westwell, Boulder, Mont.	Miss Frances M. Coakley, 325 Dayton St., St. Paul	
Broncho-Esophagological Assn.	Walter Hoover, Boston	F. Johnson Putney, 1719 Rittenhouse Square, Philadelphia	San Francisco, May 21-23,
Clinical & Climatological Assn.	James Bordley III, Cooperstown, N. Y.	Marshall N. Fulton, 124 Waterman St., Providence 6, R. I.	Hot Springs, Va., Oct. 28-30
College of Allergists	Orval R. Withers, Kansas City, Mo.	Giles A. Koelsche, Mayo Clinic, Rochester, Minn.	Atlantic City, N. J., Apr. 20-25
College of Chest Physicians	Burgess L. Gordon, Philadelphia	Mr. Murray Kornfeld, 112 E. Chestnut St., Chicago 11	San Francisco, June 18-22
College of Gastroenterology	Arthur A. Kirchner, Los Angeles	Mr. Daniel Weiss, 33 W. 60th St., New York 23	Boston, Oct. 20-23
College of Obstetricians & Gynecologists	R. Gordon Douglas, New York	John C. Ullery, 15 S. Clark St., Chicago 3	Los Angeles, Apr. 21-23,
College of Physicians	Walter L. Palmer, Chicago 37	Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4	Atlantic City, N. J., Apr. 28-May 2
College of Radiology	Ira H. Lockwood, Kansas City, Mo.	Mr. W. C. Stronach, 20 N. Wacker Dr., Chicago 6	Chicago, Feb. 5-8
College of Surgeons	Daniel C. Elkin, Lancaster, Ky.	Michael L. Mason, 40 E. Erie St., Chicago 11	Atlantic City, N. J., Oct. 14-18
Congress of Physical Med. & Rehab.	A. B. C. Knudson, Washington, D. C.	Frances Baker, One Tilton St., San Mateo, Calif.	Los Angeles, Sept. 8-13
Dermatological Assn.	Clark W. Finnerud, Chicago	J. Lamar Callaway, Duke Hospital, Durham, N. C.	Sun Valley, Ida., June 4-8,
Diabetes Assn.	Frederick W. Williams, Bronx 56, N. Y.	F. B. Peck Sr., 1 East 45th St., New York 17	
Electroencephalographic Society	John R. Knott, Iowa City	Jerome K. Merlis, 150 South Huntington Ave., Boston 30	
Federation for Cinical Research	Lawrence E. Hinkle Jr., New York 21	Wm. W. Stead, VA Hospital, Minneapolis 17	
Fracture Assn.	Duncan C. McKeever, Houston, Texas	H. W. Wellmerling, 610 Griesheim Bldg., Bloomington, Ill.	El Paso, Tex., Sept. 29-Oct. 2
Gastroenterological Assn.	M. W. Comfort, Rochester, Minn.	F. J. Ingelfinger, 65 E. Newton St., Boston 18	Washington, D. C., May 30-31
Geriatrics Society	Laurence W. Kinsell, Oakland, Calif.	Richard J. Kraemer, 2907 Post Rd., Warwick, R. I.	San Francisco, June 19-20
Goiter Assn.	Brown M. Dobyns, Cleveland, Ohio	J. C. McClintock, 149½ Washington Ave., Albany 10, N. Y.	
Gynecological Society	Norman F. Miller, Ann Arbor, Mich.	A. A. Marchetti, 3800 Reservoir Rd., N.W., Washington 7, D. C.	
Heart Assn.	Edgar V. Allen, Rochester, Minn.	Mr. John D. Brundage, 44 E. 23rd St., New York 10	Chicago, Oct. 25-29
Hospital Assn.	A. C. Snoke, New Haven, Conn.	Edwin L. Crosby, 18 E. Division St., Chicago 10	Atlantic City, N. J., Sept. 30-Oct. 4
Laryngological Assn.	Harry P. Schenck, Philadelphia	James H. Maxwell, Univ. Hosp., Ann Arbor, Mich.	San Francisco, May 19-20
Laryng. Rhin. & Otol. Society	Lawrence R. Boies, Minneapolis	C. S. Nash, 277 Alexander St., Rochester 7, N. Y.	San Francisco, May 21-23
Medical Women's Assn.	Elizabeth S. Kohler, Washington, D. C.	Miss Lillian T. Majally, 1790 Broadway, New York 19	San Francisco, June 19-22
Medical Writers' Assn.	Dean F. Smiley, Chicago 1	Harold Swanberg, 510 Maine St., Quincy, Ill.	St. Louis, Sept. 27
Neurological Assn.	Israel S. Wechsler, New York 28	Charles Rupp, 133 South 36th St., Philadelphia 4	Atlantic City, N. J., June 16-18
Ophthalmological Society	Walter S. Atkinson, Watertown, N. Y.	M. C. Wheeler, 30 W. 59th St., New York 19	White Sulphur Springs, W. Va., May 28-30
Orthopedic Assn.	David M. Bosworth, New York 21	Harold A. Sofield, 715 Lake St., Oak Park, Ill.	Hot Springs, Va., June 24-27
Orthopsychiatric Assn.	Reginald S. Lourie, New York 19	Marion F. Langer, 1790 Broadway, New York 19	New York, March 6-8
Otological Society	Dean M. Lierle, Iowa City, Ia.	Lawrence R. Boies, University Hospital, Minneapolis 14	San Francisco, May 17-18
Otorhinologic Society for Plastic Surgery	Kenneth H. Hinderer, Pittsburgh	Louis J. Feit, 66 Park Ave., New York 16	
Pediatric Society	A. A. Weech, Cincinnati 29	A. C. McGuinness, 2800 Quebec St., N.W., Washington 8, D. C.	Atlantic City, N. J., May 8-9
Physicians Art Assn.	Alma D. Morani, Philadelphia	F. H. Redewill Jr., 124 E. Hadley St., Whittier, Calif.	San Francisco '58
Physiological Society	Louis N. Katz, Chicago 16	Ray G. Daggs, 9650 Wisconsin Ave., Washington 14, D. C.	
Proctologic Society	Julius E. Linn, Birmingham, Ala.	Norman D. Nigro, 10 Peterboro St., Detroit 1	Los Angeles, June 29-July 3
Psychiatric Assn.	Francis J. Braceland, Hartford 2, Conn.	William Malamud, 80 E. Concord St., Boston 18	San Francisco, May 12-16
Psychosomatic Society	Theodore Lidz, New Haven 11, Conn.	Morton F. Reiser, 551 Madison Ave., New York 22	Cincinnati, Mar. 29-30

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MEETINGS

AMERICAN MEDICAL ASSOCIATION: Dr. George F. Lull, 535 North Dearborn St., Chicago 10, Secretary.
1957 Clinical Meeting, Philadelphia, Dec. 3-6.
1958 Annual Meeting, San Francisco, June 23-27.
1958 Clinical Meeting, Minneapolis, Dec. 2-5.
1959 Annual Meeting, Atlantic City, June 8-12.
1959 Clinical Meeting, Dallas, Texas, Dec. 1-4.

AMERICAN

August

AMERICAN VETERINARY MEDICAL ASSOCIATION, Auditorium, Cleveland, Aug. 19-22. Dr. J. G. Hardenbergh, 600 S. Michigan Blvd., Chicago 5, Executive Secretary.

BIOLOGICAL PHOTOGRAPHIC ASSOCIATION, Kahler Hotel, Rochester, Minn., Aug. 27-30. Miss Jane H. Waters, Box 1668, Grand Central P. O., New York 17, Secretary.

PUBLIC RELATIONS INSTITUTE, Chicago, Drake Hotel, Aug. 29-31. Mr. Leo E. Brown, 535 N. Dearborn St., Chicago 10, Director.

WEST VIRGINIA STATE MEDICAL ASSOCIATION, The Greenbrier, White Sulphur Springs, Aug. 22-24. Mr. Charles Lively, P. O. Box 1031, Charleston 24, Executive Secretary.

September

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, The Homestead, Hot Springs, Va., Sept. 5-7. Dr. E. Stewart Taylor, 4200 E. 9th Ave., Denver 20, Secretary.

AMERICAN COLLEGE OF HOSPITAL ADMINISTRATORS, Atlantic City, N. J., Convention Hall, Sept. 29. Mr. Dean Conley, 620 N. Michigan Ave., Chicago 11, Executive Director.

AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION, Hotel Statler, Los Angeles, Sept. 8-13. Dr. Frances Baker, 1 Tilton St., San Mateo, Calif., Secretary.

AMERICAN FRACTURE ASSOCIATION, El Paso, Tex., Hotel Cortez, Sept. 29-Oct. 2. Dr. H. W. Wellmerling, 610 Griesheim Bldg., Bloomington, Ill., Secretary.

AMERICAN HOSPITAL ASSOCIATION, Atlantic City, N. J., Hotel Traymore, Sept. 30-Oct. 3. Dr. Edwin L. Crosby, 18 E. Division St., Chicago 10, Director.

AMERICAN MEDICAL WRITERS' ASSOCIATION, Sheraton-Jefferson Hotel, St. Louis, Sept. 27. Dr. Harold Swanberg, 510 Maine St., Quincy, Ill., Secretary.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, New Orleans, Roosevelt Hotel, Sept. 29-Oct. 4. Dr. Clyde G. Culbertson, 1040 W. Michigan St., Indianapolis, Secretary.

COLLEGE OF AMERICAN PATHOLOGISTS, New Orleans, Roosevelt Hotel, Sept. 30-Oct. 4. Dr. A. H. Dearing, Prudential Plaza, Suite 2115, Chicago, Executive Secretary.

COLORADO STATE MEDICAL SOCIETY, Shirley-Savoy Hotel, Denver, Sept. 24-27. Mr. Harvey T. Sethman, 835 Republic Bldg., Denver 2, Executive Secretary.

INTERSTATE POSTGRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA, Chicago, Palmer House, Sept. 29-Oct. 3. Dr. Erwin R. Schmidt, Box 1109, Madison 1, Wis., Secretary.

KANSAS CITY SOUTHWEST CLINICAL SOCIETY, Kansas City, Mo., Municipal Auditorium, Sept. 30-Oct. 3. Dr. Ira C. Layton, 3036 Gillham Rd., Kansas City 8, Mo., Associate Director.

KENTUCKY STATE MEDICAL ASSOCIATION, Columbia Auditorium, Louisville, Sept. 17-19. Mr. J. P. Sanford, 620 S. 3d St., Louisville 2, Executive Secretary.

MICHIGAN STATE MEDICAL SOCIETY, Pantlind Hotel, Grand Rapids, Sept. 25-27. Dr. L. Fernald Foster, 606 Townsend St., Lansing 15, Secretary.

MONTANA MEDICAL ASSOCIATION, Missoula, Sept. 19-21. Mr. L. R. Hegland, P. O. Box 1692, Billings, Executive Secretary.

NEVADA STATE MEDICAL ASSOCIATION, Las Vegas, Sept. 25-28. Mr. Nelson B. Neff, P. O. Box 188, Reno, Executive Secretary.

NEW HAMPSHIRE MEDICAL SOCIETY, The Balsams, Dixville Notch, Sept. 14-17. Dr. Warren H. Butterfield, 18 School St., Concord, Executive Secretary.

NORTH PACIFIC SOCIETY OF INTERNAL MEDICINE, Portland, Ore., Sept. 6-7. Dr. Clarence C. Pearson, 1118 Ninth Ave., Seattle 1, Secretary.

PACIFIC NORTHWEST SOCIETY OF PATHOLOGISTS, Gearhart, Ore., Sept. 20-21. Dr. John E. Hill, West 101 8th Ave., Spokane 4, Wash., Secretary.

PENNSYLVANIA, MEDICAL SOCIETY OF THE STATE OF, Penn-Sheraton Hotel, Pittsburgh, Sept. 15-20. Dr. Harold B. Gardner, 230 State St., Harrisburg, Secretary.

TENNESSEE VALLEY MEDICAL ASSEMBLY, Chattanooga, Tenn., Sept. 30-Oct. 1. Dr. Harry E. Jones, 109 Medical Arts Bldg., Chattanooga 2, Tenn., Secretary.

U. S. SECTION, INTERNATIONAL COLLEGE OF SURGEONS, Palmer House, Chicago, Sept. 9-12. Dr. Karl Meyer, 1835 W. Harrison, Chicago, Secretary.

UTAH STATE MEDICAL ASSOCIATION, Union Bldg., University of Utah, Salt Lake City, Sept. 5-7. Mr. Harold Bowman, 42 S. Fifth East St., Salt Lake City 2, Executive Secretary.

VERMONT STATE MEDICAL SOCIETY, The Balsams, Dixville Notch, N. H., Sept. 14-17. Dr. Robert L. Richards, 128 Merchants Row, Rutland, Secretary.

WASHINGTON STATE MEDICAL ASSOCIATION, Olympic Hotel, Seattle, Sept. 15-18. Dr. Frederick A. Tucker, 1309 7th Ave., Seattle 1, Secretary.

WORLD MEDICAL ASSOCIATION, Istanbul, Turkey, Sept. 29-Oct. 5. Dr. Louis H. Bauer, 10 Columbus Circle, New York 19, Secretary-General.

October

AMERICAN ACADEMY OF PEDIATRICS, Palmer House, Chicago, Oct. 7-10. Dr. E. H. Christopherson, 1801 Hinman Ave., Evanston, Ill., Executive Secretary.

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AMERICAN ASSOCIATION OF MEDICAL RECORD LIBRARIANS, Schroeder Hotel, Milwaukee, Oct. 7-10. Miss Maralynn Osborne, Samuel Merritt Hosp., Oakland, Calif., Secretary.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Bishops Lodge, Santa Fe, N. M., Oct. 3-6. Dr. Jerome K. Merlis, 105 S. Huntington Ave., Boston 30, Secretary.

AMERICAN ROENTGEN RAY SOCIETY, Washington, D. C., Shoreham Hotel, Oct. 1-4. Dr. Barton R. Young, Germantown Hospital, Philadelphia 44, Secretary.

ASSOCIATION OF MEDICAL ILLUSTRATORS, Montreal, Canada, Oct. 7-9. Miss Rose M. Reynolds, 42d and Dewey Ave., Omaha 5, Secretary.

CLINICAL ORTHOPAEDIC SOCIETY, Meuhlebach Hotel, Kansas City, Mo., Oct. 11-12. Dr. Marcus J. Stewart, 869 Madison Ave., Memphis, Tenn., Executive Secretary.

INDIANA STATE MEDICAL ASSOCIATION, French Lick Sheraton, French Lick, Oct. 7-9. Mr. James A. Waggener, 23 E. Ohio St., Indianapolis 4, Executive Secretary.

OREGON STATE MEDICAL SOCIETY, Portland, Columbia Athletic Club, Oct. 2-5. Mr. Clyde C. Foley, 1115 S. W. Taylor St., Portland 5, Executive Secretary.

SOUTHERN PSYCHIATRIC ASSOCIATION, Nassau, Bahamas, Oct. 6-8. Dr. Joseph L. Knapp, 210 N. Westmoreland Ave., Dallas 11, Tex., Secretary.

SOUTHWESTERN MEDICAL ASSOCIATION, El Paso, Tex., Oct. 9-11. Dr. Russel L. Deter, 1501 Arizona St., El Paso, Tex., Secretary.

UNITED STATES SECTION, AMERICAN COLLEGE OF SURGEONS, Regional Meeting, Urbana, Ill., Oct. 12. Dr. Charles H. Drenckhahn, 602 W. University Ave., Urbana, Ill., General Chairman.

WESTERN INDUSTRIAL MEDICAL ASSOCIATION, Los Angeles, Hotel Biltmore, Oct. 4-6. Dr. Edward J. Zaik, 740 S. Olive St., Los Angeles 14, Secretary.

INTERNATIONAL AND FOREIGN

August

CONGRESS OF INTERNATIONAL SOCIETY FOR CELL BIOLOGY, St. Andrews, Fife, Scotland, Aug. 28-Sept. 3, 1957. Prof. H. G. Callan, Bell Pettigrew Museum, The University, St. Andrews, Fife, Scotland, Secretary General.

INTERNATIONAL CONGRESS OF EUROPEAN SOCIETY OF HAEMATOLOGY, Copenhagen, Denmark, Aug. 26-31, 1957. Dr. Aage Videbask, Blegdamsvej 11, Copenhagen, Denmark, Secretary General.

INTERNATIONAL CONGRESS ON GROUP PSYCHOTHERAPY, Zurich, Switzerland, Aug. 29-31, 1957. For information write: Dr. Joshua Bierer, 140 Harley St., London, W. 1, England.

INTERNATIONAL SOCIETY FOR THE STUDY OF BIOLOGICAL RHYTHMS, Semmering, Austria, Aug. 26-28, 1957. For information, write: Prof. A. Jores, II, Med. Universtats Klinik, Hamburg-Eppendorf, Germany.

September

CONGRESS OF INTERNATIONAL SOCIETY OF ORTHOPEDIC SURGERY AND TRAUMATOLOGY, Barcelona, Spain, Sept. 16-21, 1957. For information address: International Society of Orthopedic Surgery and Traumatology, 34, rue Montoyer, Brussels, Belgium.

CONGRESS OF INTERNATIONAL UNION OF RAILWAY MEDICAL SERVICES, Paris, France, Sept. 16-21, 1957. For information write: Dr. J. Ortega, 41 rue Michelet, Paris 6, France.

INTERNATIONAL CONFERENCE ON RADIO-ISOTOPES IN SCIENTIFIC RESEARCH, Paris, France, Sept. 9-20, 1957. For information address: United Nations Educational, Scientific and Cultural Organization, 19, Avenue Kleber, Paris 16, France.

INTERNATIONAL CONGRESS OF CLINICAL CHEMISTRY, New York, N. Y., U. S. A., Sept. 9-14. For information address: Dr. John G. Reinhold, 711 Maloney Bldg., Philadelphia 14, Pa., U. S. A.

INTERNATIONAL CONGRESS OF THE INTERNATIONAL UNION OF THE MEDICAL PRESS, London, England, Sept. 13-14, 1957. For information write: British Medical Association, B. M. A. House, Tavistock Square, London, W. C. 1, England.

INTERNATIONAL CONGRESS OF MILITARY MEDICINE AND PHARMACY, Beograd and Opatija, Yugoslavia, Sept. 29-Oct. 5, 1957. Colonel Dr. Aleksandar Mezic, rue Nemanjina 15, Beograd, Yugoslavia, Secretary General.

INTERNATIONAL CONGRESS OF PSYCHIATRY, Zurich, Switzerland, Sept. 1-7, 1957. For information write: Prof. J. Wyrsch, Stans (Lucern) Switzerland.

INTERNATIONAL SYMPOSIUM OF MEDICINE AND SOCIAL HYGIENE, Trieste, September 6-12, 1957. Dr. Mario Lovenati, Via Cavana, 18, Trieste, Secretary-General.

WORLD MEDICAL ASSOCIATION, Istanbul, Turkey, Sept. 29-Oct. 5, 1957. Dr. Louis H. Bauer, 10 Columbus Circle, New York 19, New York, U. S. A., Secretary-General.

October

ASSEMBLY OF ASSOCIATION OF FRENCH SPEAKING DOCTORS, Great Hall, Faculty of Medicine, 85 Boulevard Saint-Germain, Paris, France, Oct. 16-18, 1957. For information address: General Secretary, Congrés Francais de Médecine, Prof. G. Boudin, Paris, France.

CANADIAN PHYSIOLOGICAL SOCIETY, Ottawa, Ontario, Canada, University of Ottawa, Oct. 10-12. Dr. James A. F. Stevenson, 346 South St., London, Ontario, Canada, Secretary.

CONGRESS OF INTERNATIONAL SOCIETY OF SURGERY, Mexico City, Mexico, Oct. 20-27, 1957. Dr. L. Dejardin, 141, rue Belliard, Brussels, Belgium, General Secretary.

FRENCH CONGRESS OF OTOLARYNGOLOGY, Faculte de Médecine de Paris, Paris, France, Oct. 15-18, 1957. For information address: Administrative Secretary, French Congress of Otolaryngology, 17, Rue de Buci, Paris, France.

INTERNATIONAL CONGRESS OF INTERNATIONAL SOCIETY OF ANGIOLOGY, Atlantic City, N. J., U. S. A., Oct. 18-21, 1957. Dr. H. Haimovici, 103 East 90th Street, New York 28, New York, U. S. A., Secretary General.

November

INTER-AMERICAN CONGRESS OF PAN AMERICAN MEDICAL ASSOCIATION, Mexico City, Mexico, Nov. 18-22, 1957. Dr. Joseph J. Eller, 745 Fifth Ave., New York 22, N. Y., U. S. A., Executive Director.

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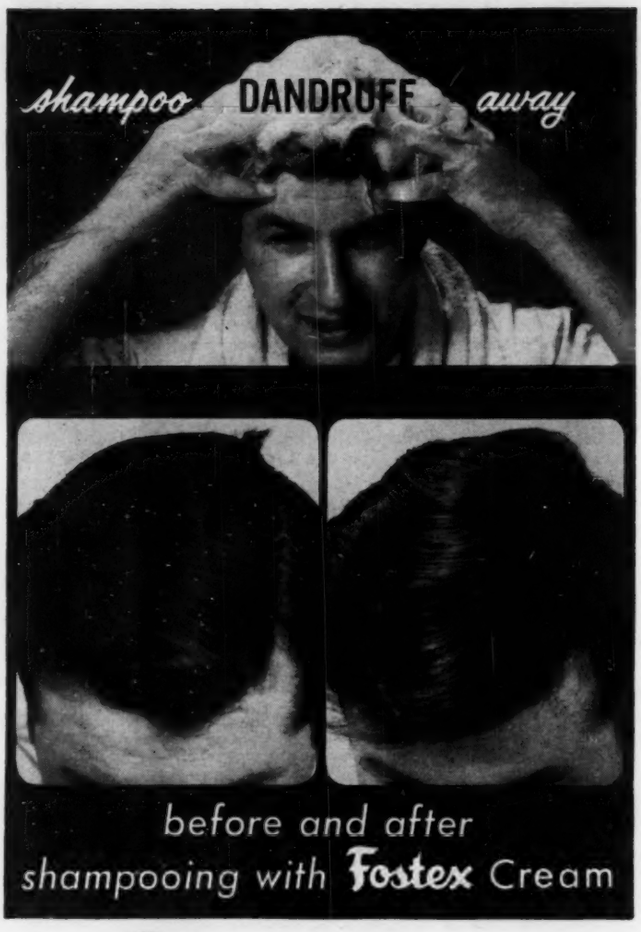

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MAGAZINE—TELEVISION REPORT

The following list of current medical articles in mass-circulation magazines on medical subjects is published each week only for the information of readers of THE JOURNAL. *Unless specifically stated, the American Medical Association neither approves nor disapproves of the articles reported.*

MAGAZINES

Sports Illustrated, Aug. 5, 1957

"A Measure of Fitness," by Dorothy Stull

"Minimum requirements for school physical education programs are being threatened by the continuous, rapid suburban expansion outward from the great metropolitan centers. In some cases the suburbs have grown so fast that the powers that be and the citizens' groups are not worried about proper physical education facilities; they are worried about whether they will have a school at all."

The American Weekly, Aug. 18, 1957

"How We'll Fight the Asiatic Flu," by William Engle

The article reassures readers about the impending flu epidemic. "You will probably be ordered to bed for from 24 to 48 hours. Aspirin and codeine may ease your discomfort, and alcohol rubs and ice packs will help reduce your fever. If you develop no complications you'll be none the worse for the tussle."

The Atlantic Monthly, August, 1957

"Fall-out Fever," by Ernest C. Pollard, Ph.D.

In a thorough discussion of the H-bomb fall-out problem, Dr. Pollard, chairman of the biophysics department at Yale University, observes: "All that will be seen by some people is that we may make a case that weapons testing will result in the unnecessary death of twelve people in the United States per year due to leukemia. These are twelve unnecessary deaths in perhaps 10,000 leukemia deaths, but they are twelve. Are we to say that this is a hateful thing akin to murder, or are we to say that such deaths are simply a necessary sacrifice for our defense, which we as a sturdy race will take in our stride, and so will develop into a tougher future generation? Again the moral lines are hard to draw."

The American Mercury, August, 1957

"Poison in Your Water," by Leo Spira, M.D.

In an article setting forth dangers of adding fluorine to drinking water, the author writes: "Since fluorine is already present in our average normal food in quantities sufficient to produce chronic illness, it is obvious that any increase in the fluorine content is certain to be dangerous."

"Lobotomy Is a Dangerous Weapon," by Stephanie Williams

The article questions the wisdom of state and national mental health legislation which the author believes may open the way to use of mental health institutions and lobotomies as political weapons in the hands of the unscrupulous.

"Why Are You Nervous?" by Robert J. Needles, M.D.

"If man is not allowed to decide for himself how he is to live, he will not escape 'anxiety in his grave.'"

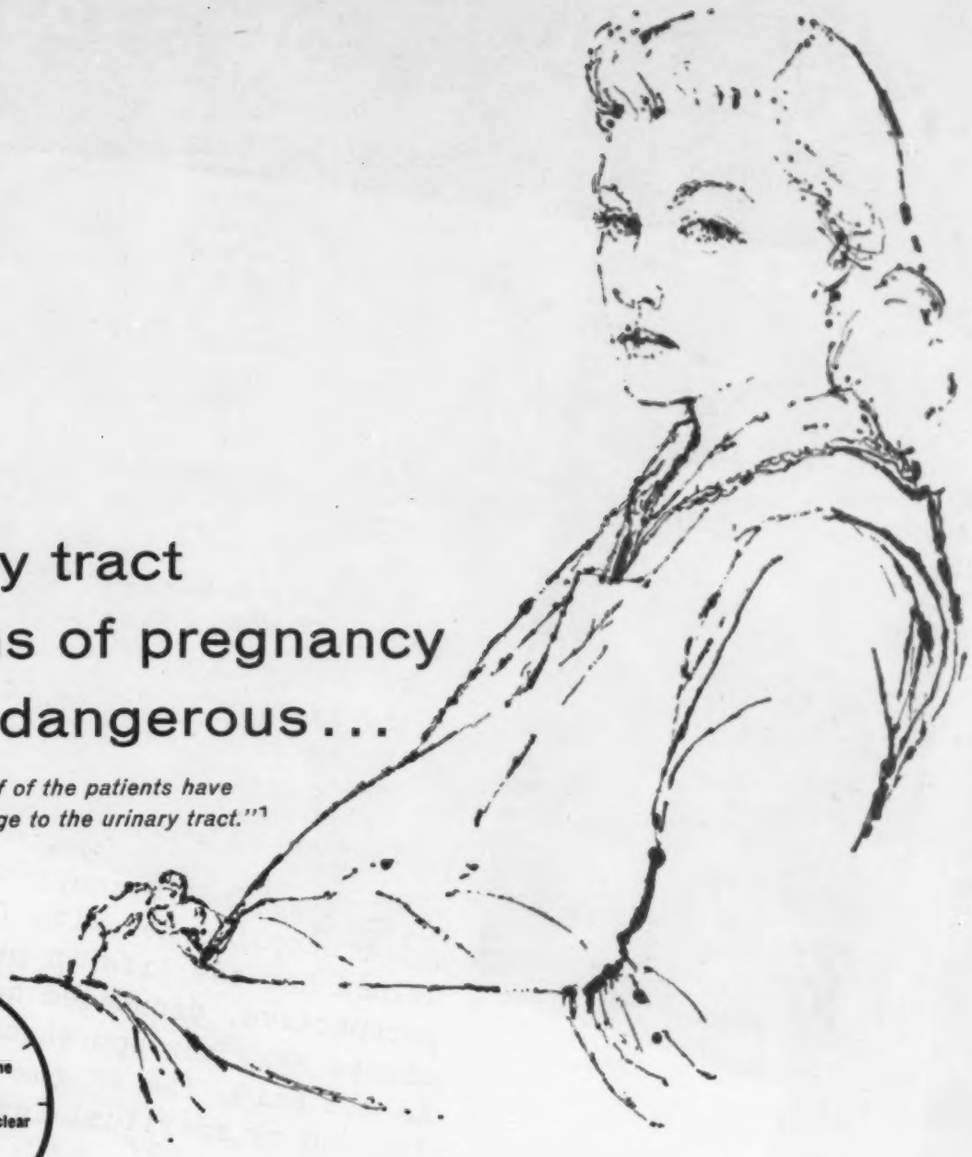
"Germs Can Get Sick Too," by Irving J. Weiss

The author discusses phage and speculates that scientists may someday be able to use phage to protect mankind from bacteria.

The Saturday Evening Post, Aug. 10, 1957

"Don't Let Medical Bills Bankrupt You," by E. R. Leibert

The author tells of how his daughter's illness put a financial burden on his family. He advises major medical health insurance for all families, and describes the types of policies available.



in urinary tract infections of pregnancy delay is dangerous...

"Approximately one-half of the patients have some permanent damage to the urinary tract."[1]

30 min. antibacterial concentrations in urine
24 hrs. turbid urine frequently clear
3 days most patients symptom-free

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FOR RAPID ERADICATION OF INFECTION

Specific for genitourinary tract infections · rapid bactericidal action · negligible development of bacterial resistance · no reports of injury to kidneys, liver and blood-forming organs · well tolerated in pregnancy[2,3]

AVERAGE FURADANTIN DOSAGE: 100 mg. q.i.d. with food or milk. Continue treatment for 3 days after urine becomes sterile.

SUPPLIED: Tablets, 50 and 100 mg. Oral Suspension (25 mg. per 5 cc. tsp.).

REFERENCES: 1. Rives, H. F.: Texas J. M. 52:224, 1956. 2. Diggs, E. S.; Prevost, E. C., and Valderas, J. G.: Am. J. Obst. 71:399, 1956. 3. MacLeod, P. F., et al.: Internat. Rec. Med. 169:561, 1956.

NITROFURANS

a new class of antimicrobials—neither antibiotics nor sulfonamides

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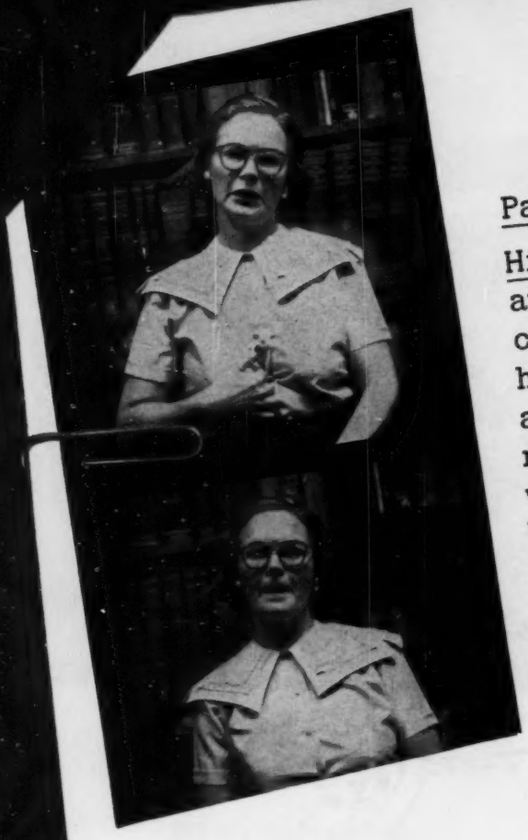


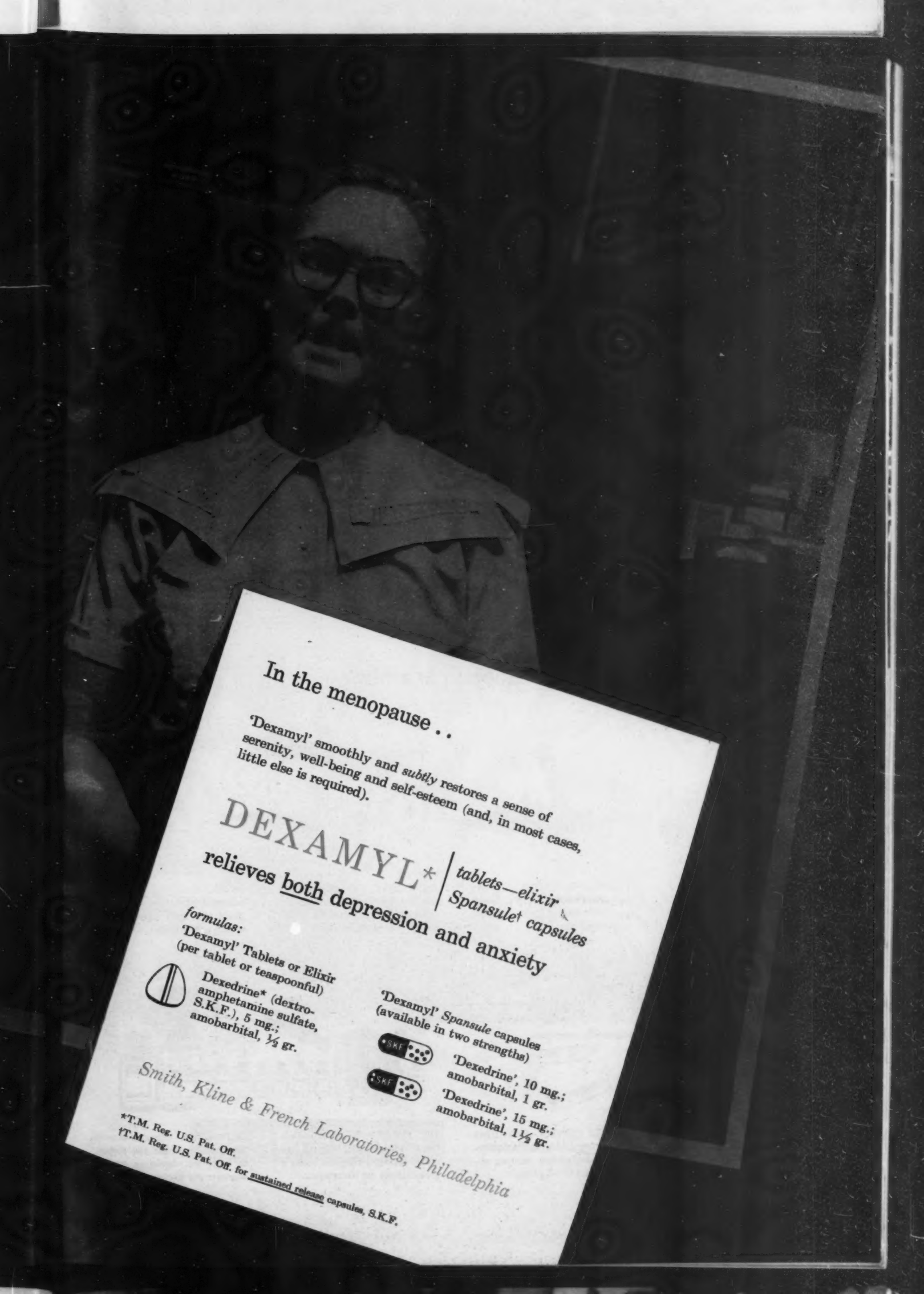
Patient: Mrs. M.F.

History: "Her periods had dwindled and suddenly, in three months' time, ceased completely. Simultaneously, hot flashes, band-like headaches, aches and pains, sweating, and a nasty disposition appeared. She was forty-five years of age, and beginning to be fat, flabby and lackadaisical."

Medication: 'Dexamyl' Spansule

Results: "The 'Dexamyl' Spansule . . . supplied her with fortitude, helped her see life in proper perspective, decreased her appetite, chased away her apprehension. As she said, the drug 'raised my spiritual level.'"

(From a case report by the patient's physician; unposed photos of Mrs. M.F. taken during an interview with the physician.)



In the menopause . .

'Dexamyl' smoothly and *subtly* restores a sense of serenity, well-being and self-esteem (and, in most cases, little else is required).

DEXAMYL*

tablets—elixir
Spansule capsules

relieves both depression and anxiety

formulas:

'Dexamyl' Tablets or Elixir
(per tablet or teaspoonful)

Dexedrine* (dextro-amphetamine sulfate, S.K.F.), 5 mg.;
amobarbital, ½ gr.

'Dexamyl' *Spansule* capsules
(available in two strengths)

'Dexedrine', 10 mg.; amobarbital, 1 gr.

'Dexedrine', 15 mg.; amobarbital, 1½ gr.

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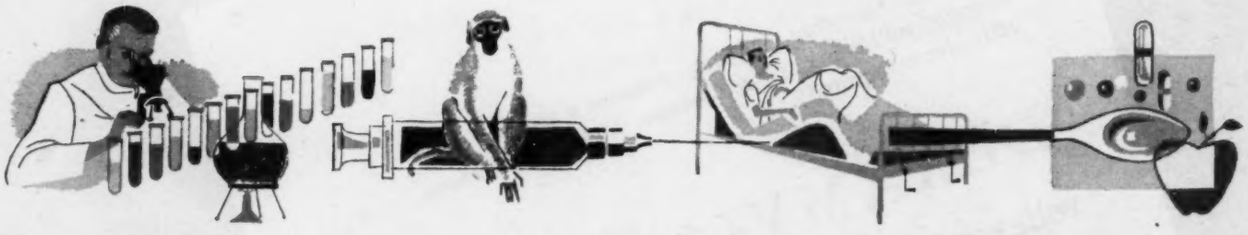
Just thirty years ago, the big "killers" were pneumonia, smallpox, tuberculosis and diphtheria. Today, they are virtually under control, and inquiring medical minds (including those at work in Parke-Davis laboratories) are constantly edging closer to the answers to heart attacks, cancer, nutritional diseases, mental illness and many other vital problems.

All this, we feel, is what we really work for at Parke-Davis—the better health and longer life that come with better medicines.

TYPICAL STEPS IN THE DEVELOPMENT OF A NEW PARKE-DAVIS PRODUCT



WORLD-WIDE RESEARCH—Parke-Davis often spends years developing a new medicine; 18 years, for example, on one of our epilepsy drugs.

LABORATORY TESTING—To make sure a new medicine is safe, it must pass a variety of tests, including animal studies.

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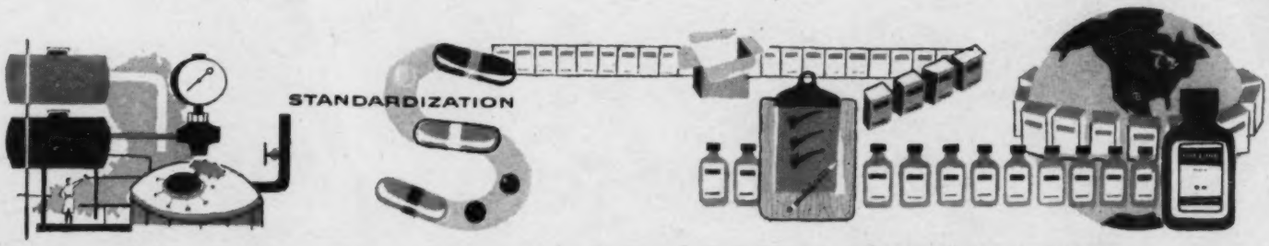
PRODUCT DEVELOPMENT—Here we determine what form this product should take (pill? capsule? bottled liquid?) and such things as taste.



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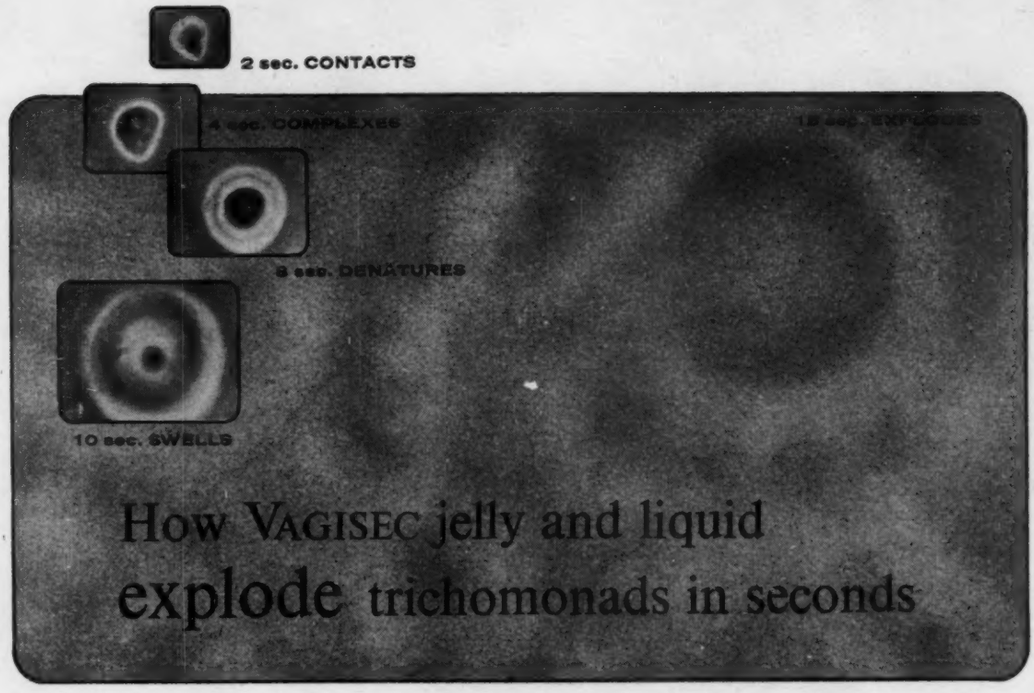

VAGINAL trichomoniasis yields to VAGISEC® liquid and jelly quickly.[1-5] These unique trichomonacides *explode* flagellates after 15 seconds' contact. Following a VAGISEC *douche,* VAGISEC jelly maintains trichomonacidal effectiveness 'round-the-clock. With this new approach, therapy succeeds in more than 90 per cent of cases.[4]

Research proves effectiveness — In hundreds of tests with slide preparations, mixtures of VAGISEC jelly and vigorous cultures of *Trichomonas vaginalis* have been examined under a phase-contrast microscope.[3,6] The trichomonads *explode and disperse within 15 seconds* after contact with jelly, like those in a VAGISEC douche solution.[3-6]

Explosion succeeds — VAGISEC liquid and jelly penetrate rapidly to trichomonads covered by vaginal mucus and cellular debris and *explode* them, avoiding post-treatment flare-ups.[3-5] VAGISEC therapy often rids stubborn clinical cases of "trich" even after other agents fail.

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Active ingredients in VAGISEC liquid: Polyoxyethylene nonyl phenol, Sodium ethylene diamine tetra-acetate, Sodium dioctyl sulfosuccinate. In addition, VAGISEC jelly contains Boric acid, Alcohol 5% by weight.

References: **1.** Decker, A., and Decker, W. H.: Practical Office Gynecology, Philadelphia, F. A. Davis Company, 1956. **2.** McCoogan, L. S.: J. Michigan M. Soc. *55*:682 (June) 1956. **3.** Davis, C. H. (Ed.): Gynecology and Obstetrics (revision), Hagerstown, W. F. Prior, 1955, vol. 3, chap. 7, pp. 23-33. **4.** Davis, C. H.: West. J. Surg. *63*:53 (Feb.) 1955. **5.** Davis, C. H.: J.A.M.A. *157*:126 (Jan. 8) 1955. **6.** Molomut, N., Port Washington, N. Y.: Personal communication (Jan.) 1957. **7.** Draper, J. W.: Internat. Rec. Med. *168*:563 (Sept.) 1955. **8.** Feo, L. G., et al.: J. Urol. *75*:711 (April) 1956.

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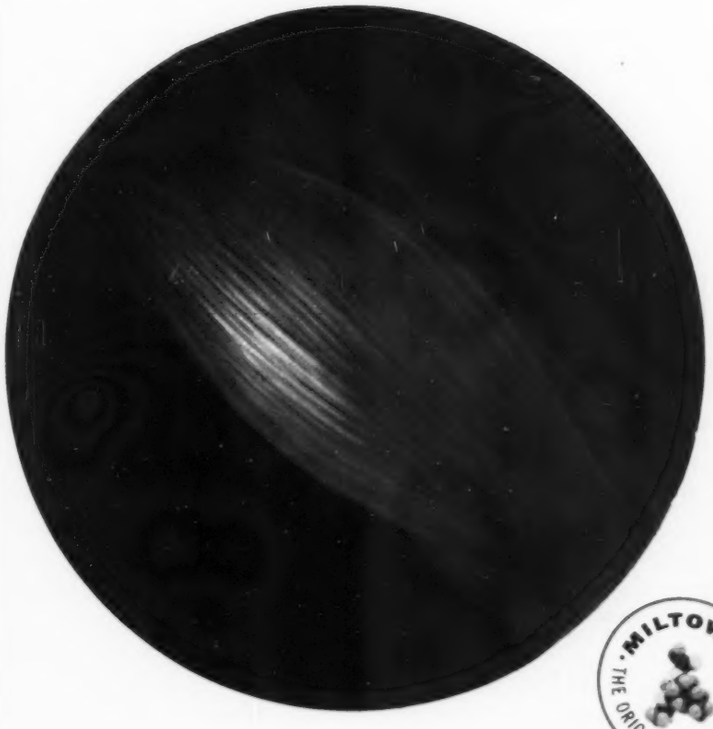

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"Since it [meprobamate—'Miltown'] does not cloud consciousness or lessen intellectual capacity, it can be used...even by those busily occupied in intellectual work."

Keyes, B. L.: Pennsylvania M. J. 60: 177, Feb. 1957.

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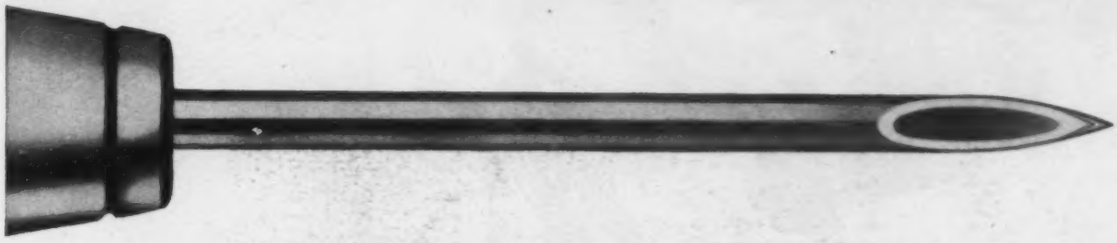

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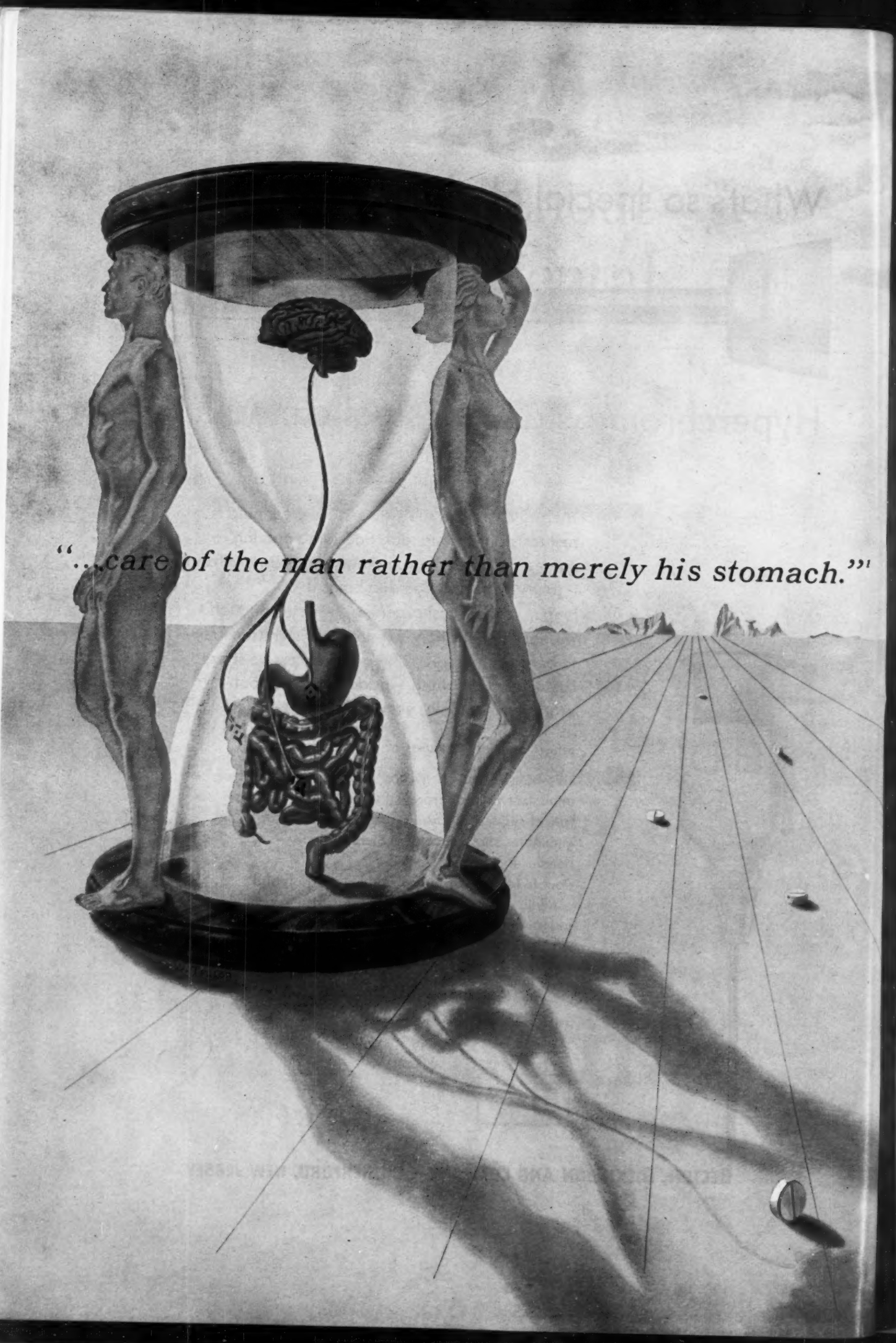
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Tridihexethyl iodide 25 mg.
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Dosage: 1 tablet t.i.d. at mealtime and 2 tablets at bedtime.

Available: Bottles of 50 scored tablets.

References:

1. Wolf, S. & Wolff, H. G., Human Gastric Function, Oxford University Press, New York, 1947.
2. Berger, F. M.: The pharmacological properties of 2-methyl-2-*n*-propyl-1, 3-propanediol dicarbamate (Miltown), a new interneuronal blocking agent. J. Pharmacol. & Exper. Therap. *112*:413, Dec. 1954. 3. Altschul, A., and Billow, B.: The clinical use of Miltown (2-methyl-2-*n*-propyl-1, 3-propanediol dicarbamate). New York J. Med. In press, 1957.
4. Phillips, R. E.: Use of meprobamate (Miltown) for the treatment of emotional disorders. Am. Pract. & Digest Treat. *7*:1573, Oct. 1956.
5. Selling, L. S.: Clinical study of a new tranquilizing drug. J.A.M.A. *157*:1594, April 30, 1955. 6. Selling, L. S.: A clinical study of Miltown, a new tranquilizing agent. J. Clin. & Exper. Psychopath. *17*:7, March 1956.
7. Cayer, D.: Prolonged anticholinergic therapy of duodenal ulcer. Am. J. Digest. Dis. *1*:301, July 1956.

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[illegible] M. L., and Russel, R. B.: Antibiotic Medicine & Clin. Therapy, 2:722, 1956.

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Simplified Dosage:

Just 1 tablet on arising and 1 before the evening meal. Bottles of 30 tablets.

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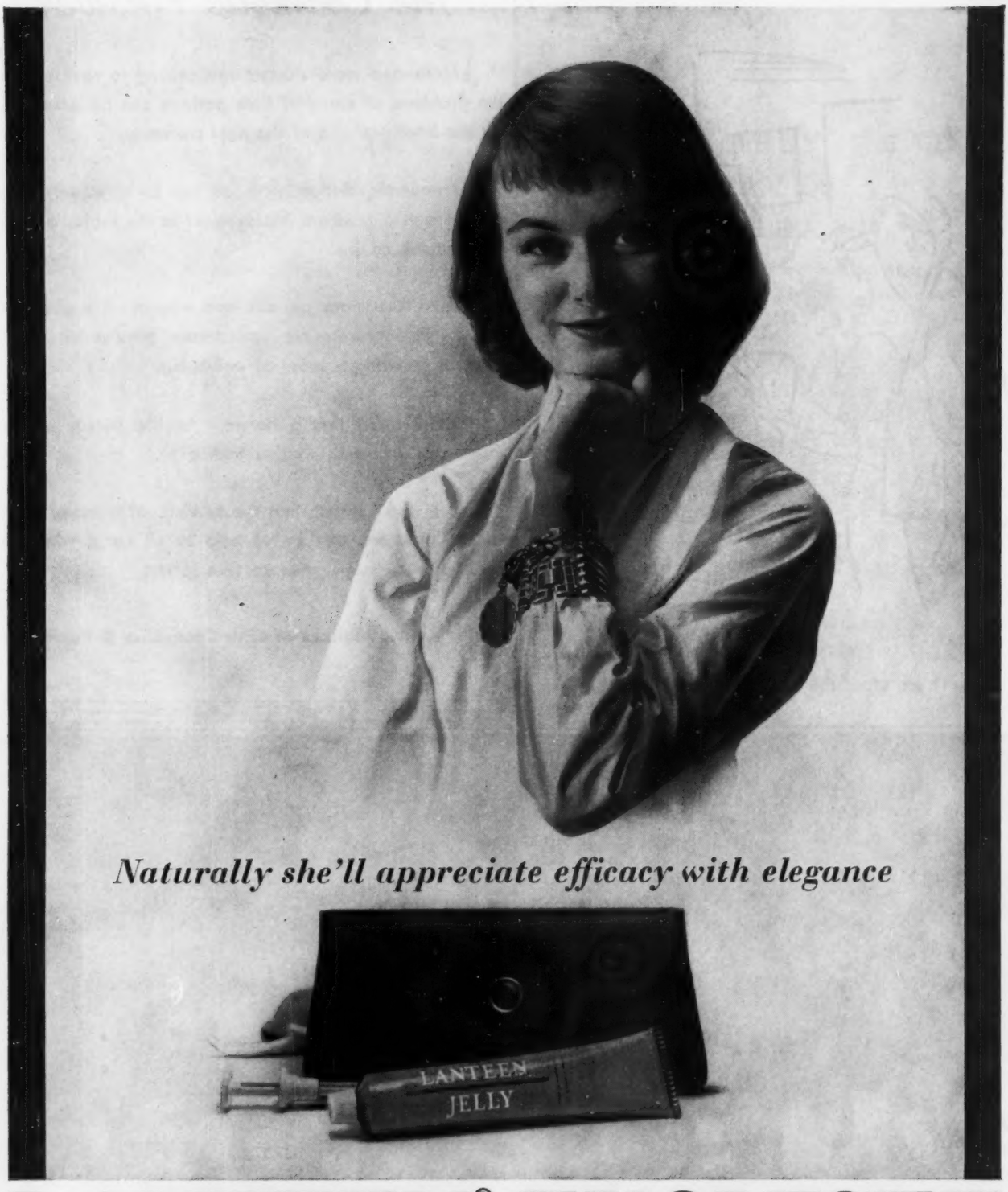

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A Widely Preferred Antihypertensive

. . . because Rauwiloid (alseroxylon) is outstanding for its effectiveness and safety . . . because minimal dosage adjustment is necessary . . . because the incidence of depression is low . . . because up to 80% of patients with mild labile hypertension and many with more severe forms respond to Rauwiloid as the sole medication.

An Effective Tranquilizer, too

. . . because Rauwiloid's *nonsoporific* sedative action relieves anxiety in a long list of unrelated diseases not necessarily associated with hypertension . . . without masking of symptoms . . . without impairing intellectual or psychomotor efficiency.

Dosage: Simply two 2 mg. tablets at bedtime. After full effect one tablet suffices.

A logical first step when more potent drugs are needed

Rauwiloid is recognized as basal medication in all grades and types of hypertension. In combination with more potent agents it proves synergistic or potentiating, making smaller dosage effective and freer from side actions.

Rauwiloid®+Veriloid®

In moderate to severe hypertension this single-tablet combination permits long-term therapy with dependably stable response. Each tablet contains 1 mg. Rauwiloid and 3 mg. Veriloid (alkavervir). Initial dose, 1 tablet t.i.d., p.c.

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In severe, otherwise intractable hypertension this single-tablet combination provides smoother, less erratic response to hexamethonium. Each tablet contains 1 mg. Rauwiloid and 250 mg. hexamethonium chloride dihydrate. Initial dose, ½ tablet q.i.d.

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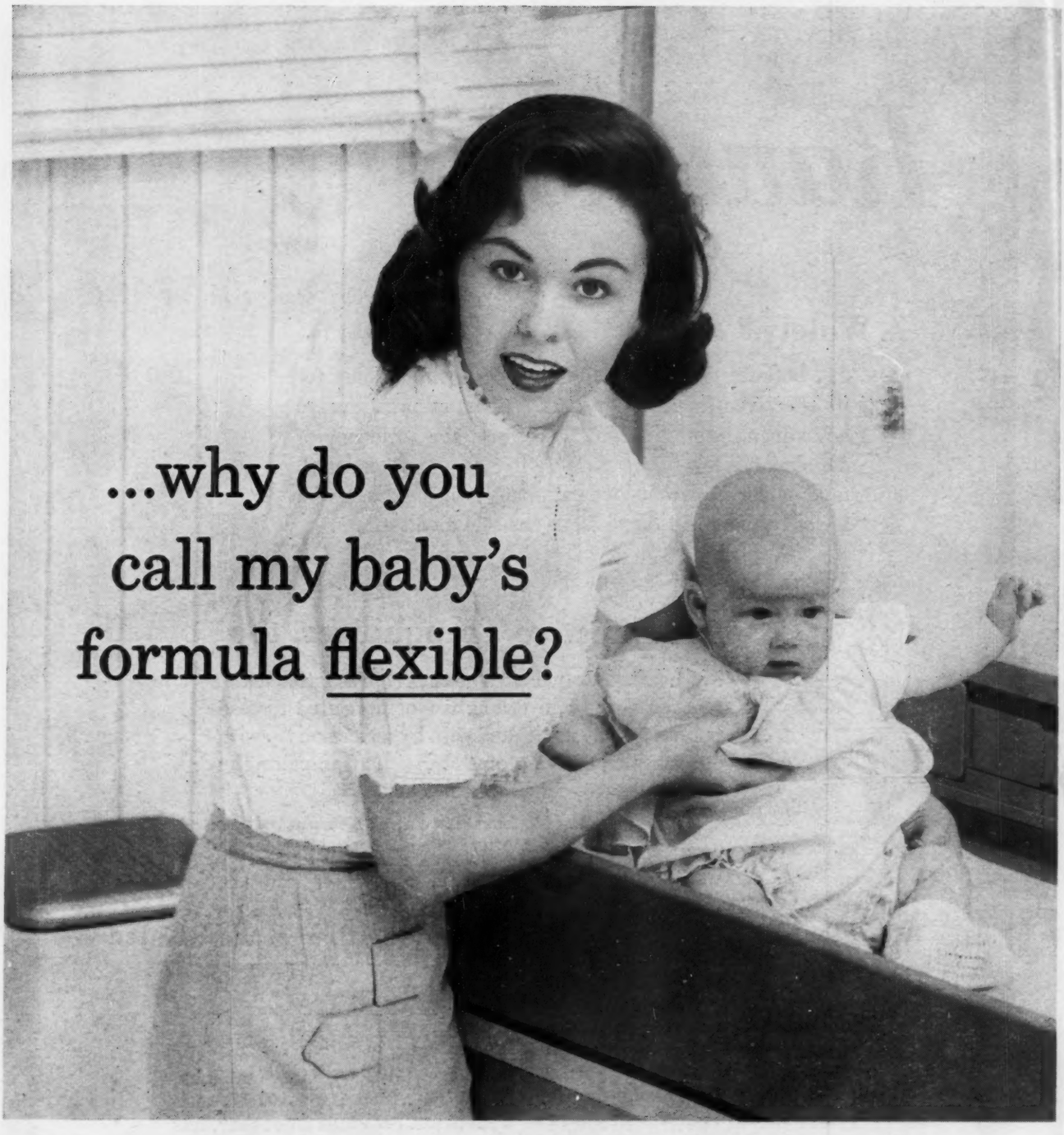

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Optimum prescription-quality in today's trend to the individualized formula.

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Every woman who suffers
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The menopause is nature's way of restricting reproduction to the years best suited for child-bearing. Nature, however, doesn't always make provision for preserving normal physical and mental patterns during this disrupting period of a woman's life.

Inadequate submenstrual levels of estrogen may result in a variety of physiologic and psychologic disorders. Estrogen not only affects the sex-linked tissues, but is "...one of the most important metabolic regulators of the organism..."[1] and exerts an influence on all the tissues of the body.[2]

It is now recognized that complaints such as headache, insomnia, vague aches and pains and nervousness may be the first symptoms of estrogen deficiency even in the absence of the classic hot flushes and menstrual irregularity. Furthermore, declining ovarian function has long been associated with musculoskeletal disorders such as arthralgias,[3] myalgias and postmenopausal osteoporosis.[4]

"Premarin" promptly relieves the distress symptomatic of the menopause and pre- and postmenopausal syndrome. It supplies all the naturally occurring components of the equine estrogen-complex, meticulously preserved in the form of water-soluble conjugates.

Wide clinical application over a period of 15 years attests to the value of "Premarin" replacement therapy for improving general metabolism, stabilizing the vasomotor system and imparting a "sense of well-being."

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BIBLIOGRAPHY: 1. Goldzieher, M. A., and Goldzieher, J.W.: Endocrine Treatment in General Practice, New York, Springer Publishing Company, Inc., 1953, chap. 2, p. 25. • 2. Smith, G. Van S., in Williams, R. H.: Textbook of Endocrinology, Philadelphia, W. B. Saunders Company, 1950, chap. 6, p. 349. • 3. Greenblatt, R. B., and Kupperman, H. S.: M. Clin. North America *30*:576, 1946. • 4. Reifenstein, E. C., Jr., in Harrison, T.R.: Principles of Internal Medicine, ed. 2, New York, The Blakiston Company, 1954, vol. 1, chap. 98, p. 700.

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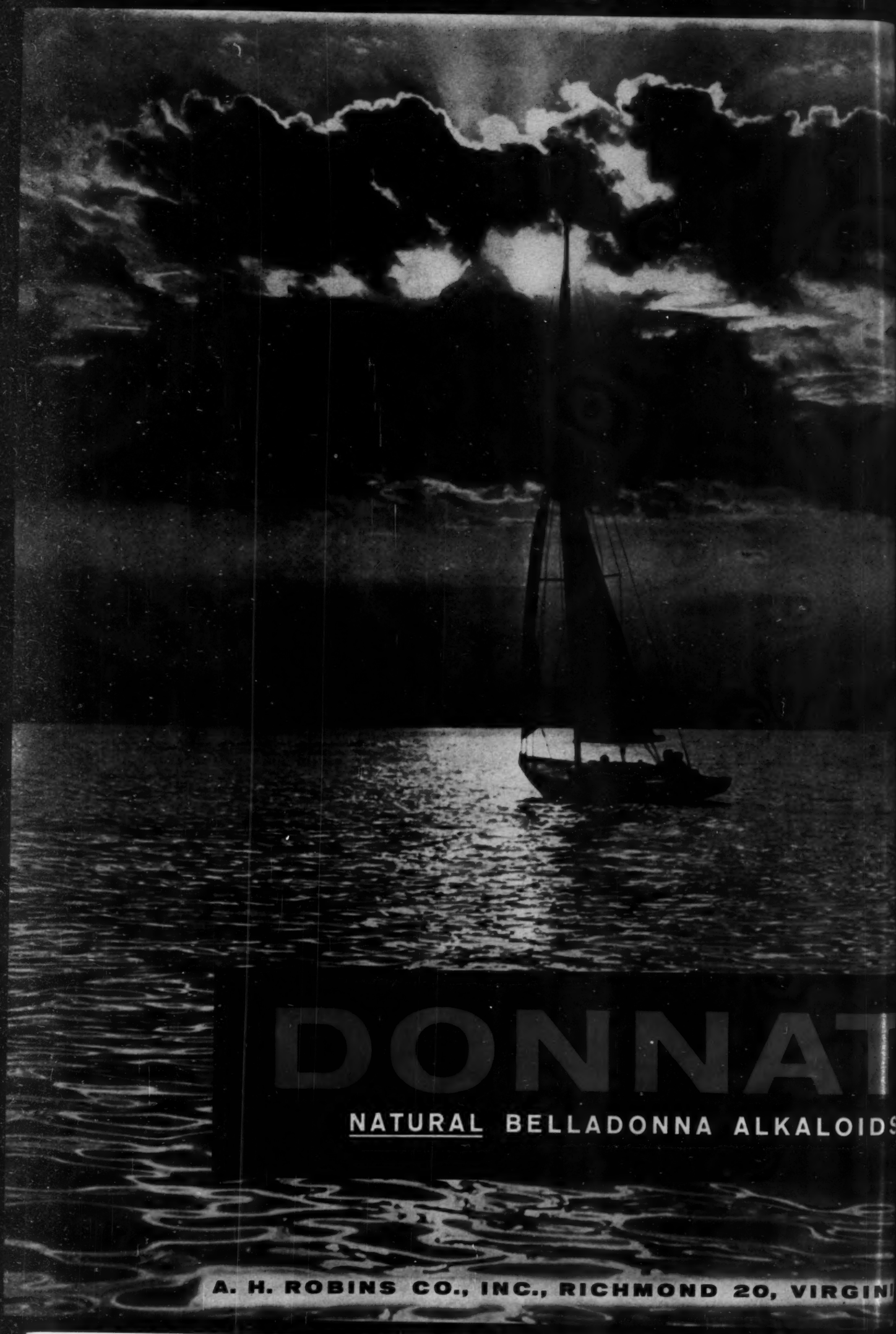
gets rough on your patients...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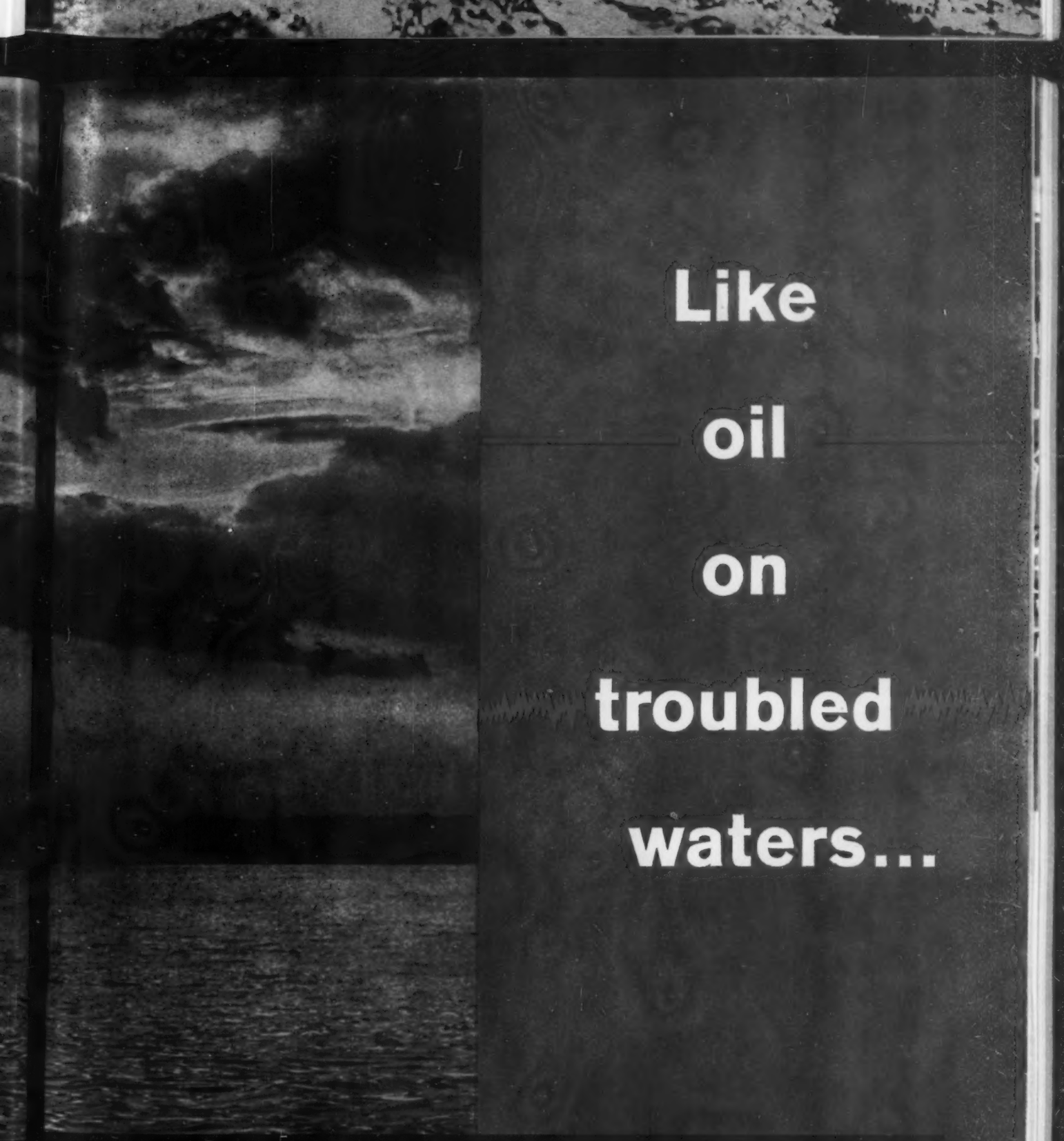

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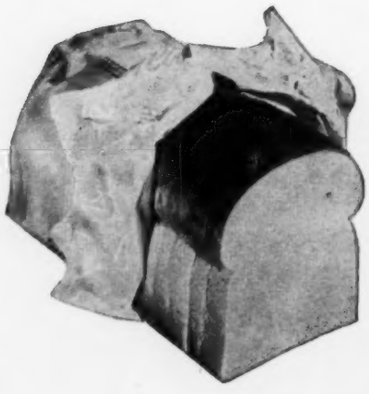

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in **intermittent claudication**
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also effective in
diabetic vascular disease
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Arlidin is available in 6 mg. scored tablets and 5 mg. per cc. parenteral solution. See PDR for dosage and packaging.

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1 Arlidin effectively dilates blood vessels in skeletal muscle — where needed most.

2 Arlidin improves the ability to walk in 2 out of 3 patients for as long as it is administered.

3 Arlidin is well tolerated . . . easy to administer.

*Stein, I.: Annals of Internal Medicine 45:185, 1956.

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From other Pages

William Hunter and Medical Education

William Hunter . . . and his brother John were both great teachers, practitioners, and workers in research projects to extend the boundaries of knowledge. In later years William wrote "To acquire knowledge and to communicate it to others has been the pleasure, the business, and the ambition of my life." . . .

William [Hunter] at the age of 13 obtained a bursary at the University of Glasgow, and became a student in Arts intending to enter the Ministry. After leaving the University he applied unsuccessfully for the post of schoolmaster at East Kilbride, but having in the meantime become acquainted with William Cullen . . . who was in medical practice at Hamilton, he decided to follow medicine as his vocation and resided in Cullen's house for three years as his apprentice. When he was 22, on Cullen's advice, he went for a year to Edinburgh (1739-40) and attended the anatomy classes of Professor Alexander Monro (primus). Cullen also advised him to spend a year or two in London and then return to Hamilton where they would practise as partners. Fortunately, for both of them and for medicine, the arrangement did not materialise and in later years while William was becoming the best-known surgeon, man-midwife, and anatomist in London, William Cullen became Lecturer in Chemistry and later Professor of Medicine (1751) at the University of Glasgow. . . .

When William Hunter came to London in 1740 private schools of anatomy were well established and prosperous. His friends William Smellie and James Douglas had been teaching anatomy for years. . . . The curious union between the barbers and surgeons was dissolved in 1745 and the newly founded Corporation of Surgeons in order to justify its position at once began to arrange curricula and examinations which had to be passed by candidates wishing to obtain the diploma. . . . In 1740 the private anatomy school which had the greatest reputation was that of Dr. Frank Nicholls (1699-1778) which began in Oxford in 1721, and was transferred to London in 1727; William Hunter attended these classes. . . . Frank Nicholls ceased lecturing in 1743 and William tried unsuccessfully to take over the school. It was from Nicholls that he learnt the art of injection and the preparation of corroded specimens. William Hunter commenced his lectures and classes in anatomy in 1746. The advertisement of the course read: "Gentlemen may have the opportunity of learning the art of dissecting during the whole winter session in the same manner as in Paris." The same manner as in Paris meant that the pupils themselves did the dissections with the help of demonstrators. There were in December 1746 at least six lectures given every night at different schools in London, so to teach in the same manner as in Paris meant that each school would need two or three subjects every week. These could not be supplied only from the gallows at Tyburn so they had to be obtained by other means. Letters appeared in the press one of which urged that people should leave their bodies for dissection as "the only reason for burying the dead is that they may not be offensive to the living." . . .

In 1747 William Hunter increased his reputation as a teacher by taking over from Samuel Sharp, a surgeon on the staff of Guy's Hospital, the anatomy and surgery lectures to a Society of Naval Surgeons. He continued to give lectures at the various places where he lived and accumulated wealth by these and his practise so that in 1764 he conceived the idea that it would advance medical education if a central museum was founded "for the improvement of anatomy, surgery, and physic in London." He wrote to his friend Cullen who was then Professor of the Institutes of Physic (Physiology) in Edinburgh suggesting that the two of them "should raise a School of Physic upon a noble plan in Glasgow I would propose to give all my museum, which contains things which cannot be bought, and my library, I could build a theatre at my own expense; and I should ask nothing for teaching but the credit of doing it with reputation." The scheme came to nothing. . . . [Another] scheme also came to nothing. In the meantime he had purchased a house in Great Windmill Street and commenced rebuilding. In June 1768 William Hunter moved into this house which consisted of "a handsome amphitheatre and other convenient apartments for his lectures and dissections, there was one magnificent room fitted with great elegance and propriety as a museum." The lectures were henceforth given in this building, the Great Windmill Street School. . . .

It must never be forgotten that William Hunter taught his younger brother, and many of the methods and characteristics of John must have been developed by him during the eleven years they were so closely associated together in the study of anatomy. Several of William's pupils in due course were instrumental in the foundation and development of hospitals and also medical schools, but not to the same extent as those who had been taught by John.—Sir E. Finch, M.D., The Influence of the Hunters on Medical Education, *Annals of the Royal College of Surgeons of England*, April, 1957.

Gobbledegook on the Witness Stand

With an erudite profundity,
And subtle cogitabundity,
The medical expert testifies in court
Explains with ponderosity
And keen profund verbosity
The intricate nature of the plaintiff's tort.

Discoursing on pathology,
Anatomy, biology,
Opines the patient's orbit suffered thus:
Contusions of integuments
With ecchymose embellishments,
And bloody extravasation forming pus.

A state of tumerosity
Producing lacrimosity,
Abrasion of the cuticle severe,
All diagnosed externally,
Although he feared, internally
Sclerotic inflammation might appear.

The jury sits confused, amazed,
By all this pleonasm dazed,
Unable to conceive a single word,
All awed, they think with bated breaths
The plaintiff dies a thousand deaths—
What agony, what pain he had endured.

Said then the counsel for defense,
Devoid of garrulous eloquence,
Would I be correctly quoting you
To say his eye was black and blue.
To this the doctor meekly answered, "Yes."

Quoted by C. J. Stetler, You, Doctor, Will Be a Witness, *Journal of the Medical Association of Georgia*, October, 1956.

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1. Perkoff, G. T., *et al.*: J. Clin. Endocrinol. *14*:531 (May) 1954. 2. Abramson, D., and Reid, D. E.: J. Clin. Endocrinol. *15*:206 (Jan.) 1955. 3. Eichner, E.; Waltner, C.; Goodman, M., and Post, S.: Am. J. Obst. & Gynec. *71*:1035 (May) 1956.

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as in every season—allergy relief

usually without salt or water restriction

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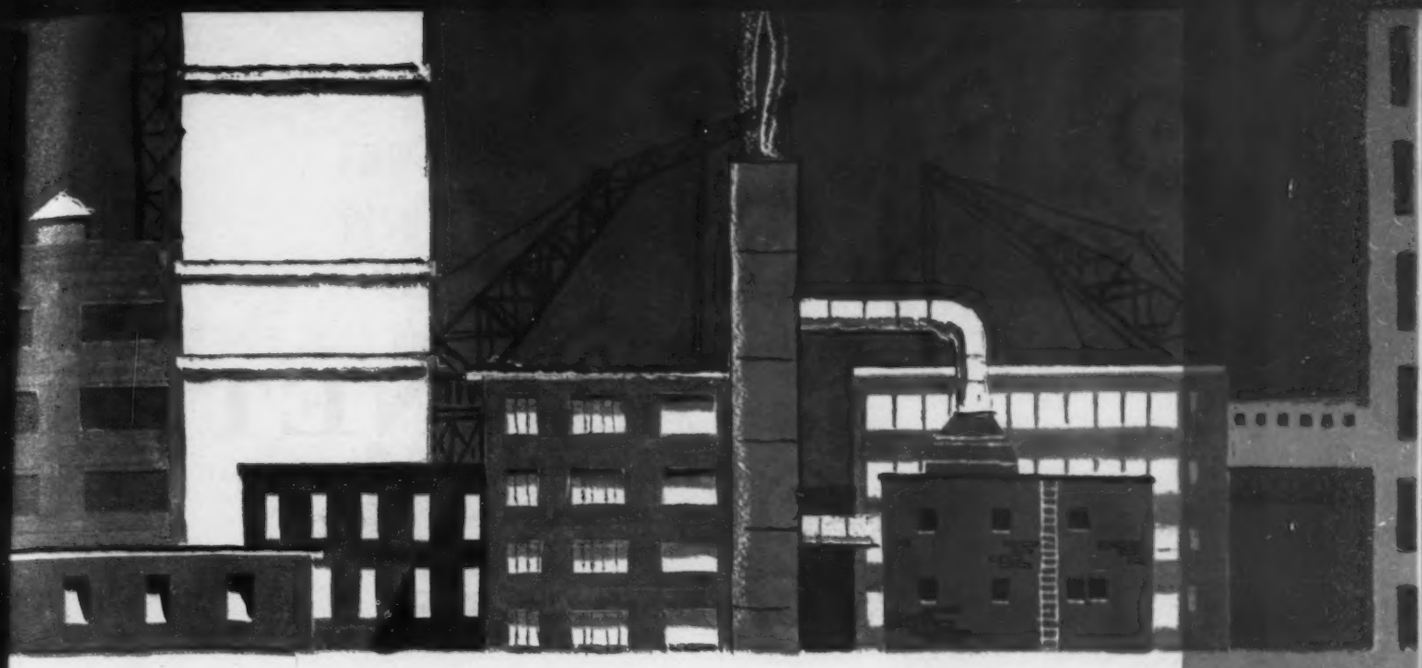

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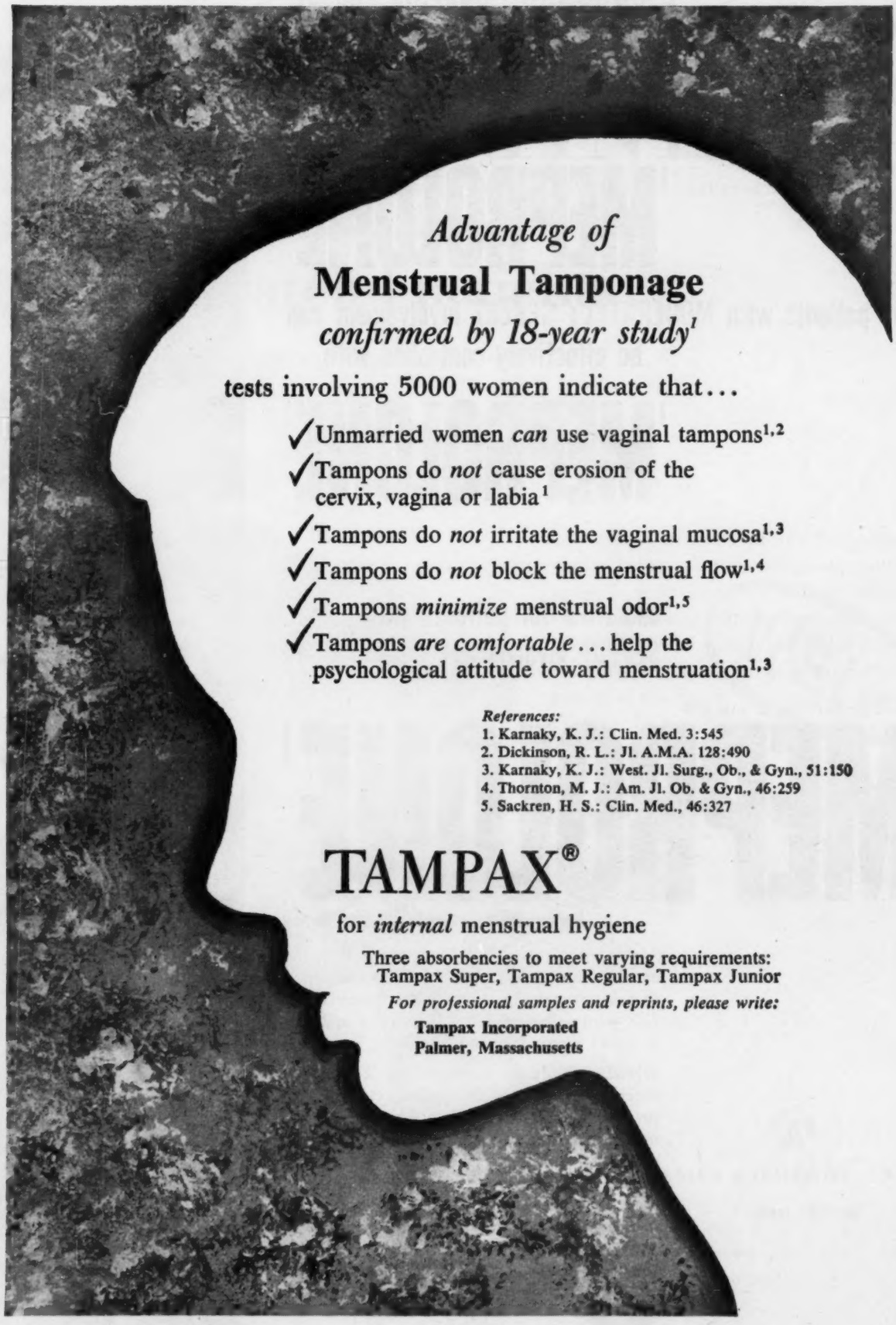

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References:
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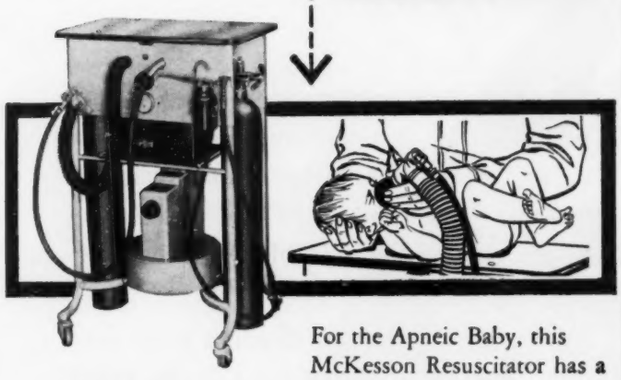

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M. D. George Washington University)
Ann. District of Columbia 26: 17-19, 19

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†RESULTS OF TESTS ON HUMAN SUBJECTS SHOWING **COMPARATIVE TOLERANCE OF INORGANIC IODIDE SOLUTION AND ORGANIDIN** BY ORAL ADMINISTRATION AT CORRESPONDING IODINE LEVELS

INORGANIC IODIDE SOLUTION					ORGANIDIN				
NO. OF SUBJECTS	DOSE IN CC. 3 TIMES DAILY	DURATION OF DOSAGE IN DAYS (AVERAGE)	NO. OF SUBJECTS WITH SYMPTOMS	†† SYMPTOMS	NO. OF SUBJECTS	DOSE IN CC. 3 TIMES DAILY	DURATION OF DOSAGE IN DAYS (AVERAGE)	NO. OF SUBJECTS WITH SYMPTOMS	†† SYMPTOMS
4	0.09	13	3	Nausea	6	1.5	30	1	Palpitation slightly at night
			3	Vomiting				1	Slight skin rash
			2	Diarrhea					
4	0.36	13	1	Abdominal cramps	3	2.1	30	None	None
			1	Nasal catarrh	5	2.7	30	None	None
4	0.54	6	3	Nausea	4	3.6	30	None	None
			2	Diarrhea					
			1	Slight skin rash					
5	0.72	6½	3	Diarrhea					
			1	Nasal catarrh					

SUMMARY		SUMMARY	
Total No. of subjects	17	Total No. of subjects	18
No. of instances in which untoward symptoms were reported by the 17 subjects	20	No. of instances in which untoward symptoms were reported	2

††Perspiration, nervousness, impaired or improved appetite, frequency of urination, polydipsia and diuresis were considered, but nothing marked was found. The subjects diluted the doses of Inorganic Iodide Solution and Organidin in a third of a glass of water, taken approximately one half hour after meals.

†Slaughter, D., South Dakota J. Med. and Pharm., 1, 425 (Nov.), 1948.

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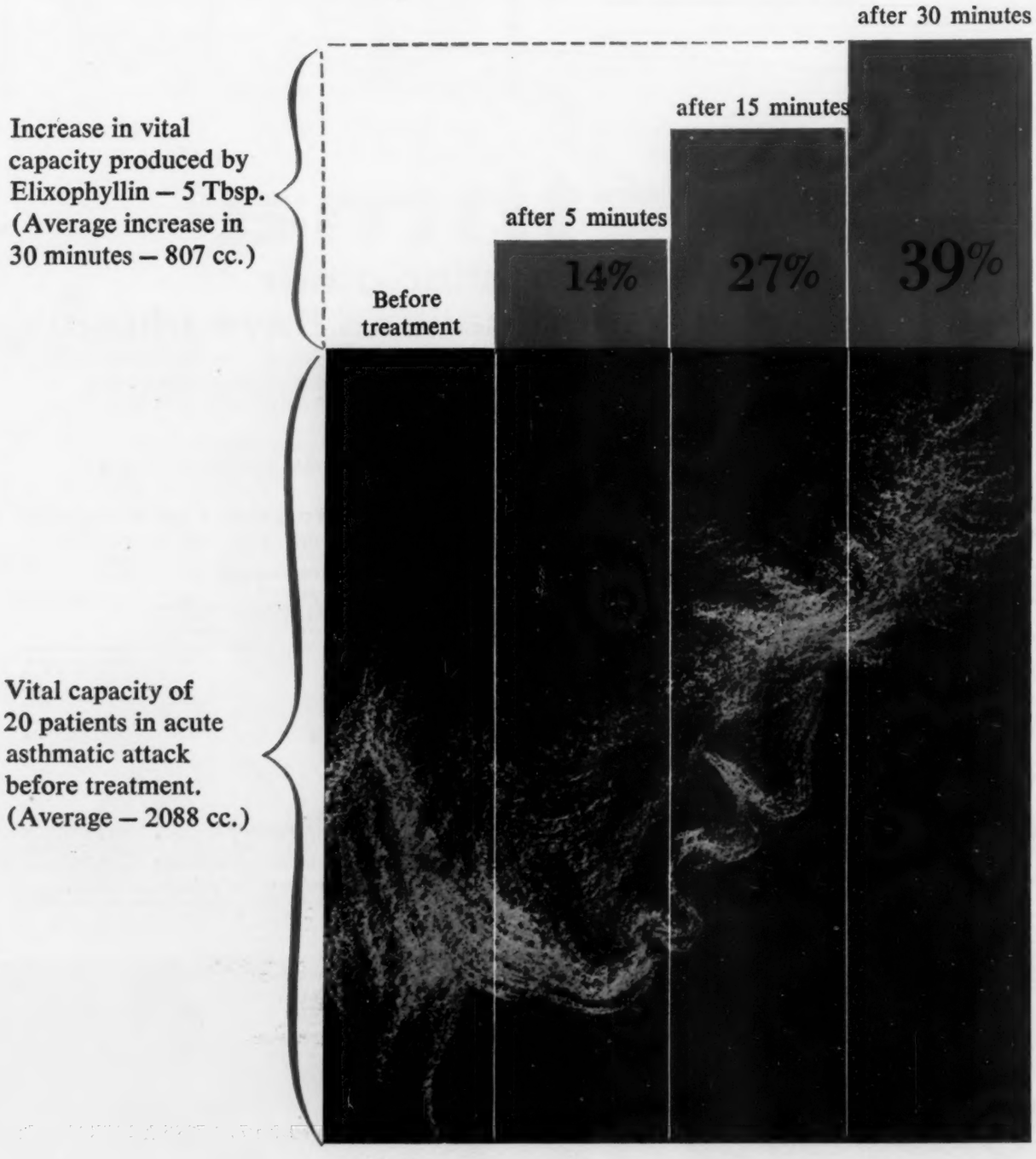
after 30 minutes
after 15 minutes
after 5 minutes
Increase in vital capacity produced by Elixophyllin – 5 Tbsp. (Average increase in 30 minutes – 807 cc.)
14%
27%
39%
Before treatment
Vital capacity of 20 patients in acute asthmatic attack before treatment. (Average – 2088 cc.)

1. Schluger, J., et. al.: Am. J .M. Sci. 233:296, 1957.
2. Spielman, D.: Ann. Allergy (15:270, 1957).
3. Kessler, F.: Connecticut St. M.J. 21:205, 1957.
4. Schluger, J., et al.: Am. J.M. Sci. (234:28, 1957).
5. Greenbaum, J.: (to be published).
6. Waxler, S. J. & Schack, J. A.: J.A.M.A. 143:736, 1950.
7. Bradwell, E. K.: Acta med. scandinav. 146:123, 1953.

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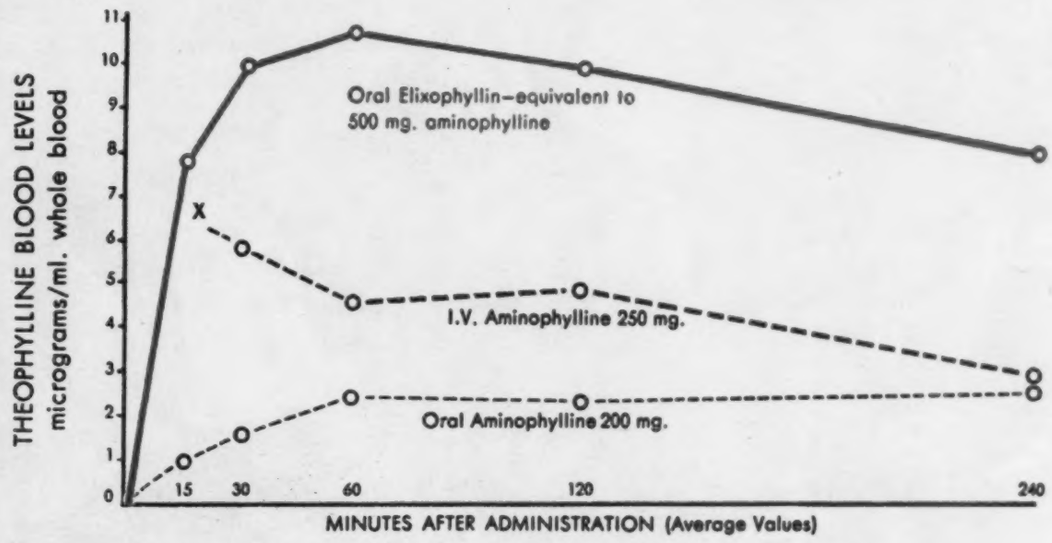

Elixophyllin data–Schluger et al.;[1] aminophylline data–Waxler and Schack.[6]
X – Waxler and Schack[6] made no 15 minute determination. Bradwell[7] reported 7.0 mcg./ml. at 15 minutes following 300 mg. of I.V. aminophylline.

Adult dose in severe attacks is a wineglassful (75 cc. or 5 tablespoonfuls) containing theophylline equivalent to 500 mg. aminophylline in hydro-alcoholic solution (alcohol 20%). Unusually well tolerated. Children's dosage: 0.375 (⅜) cc. per lb. body weight.

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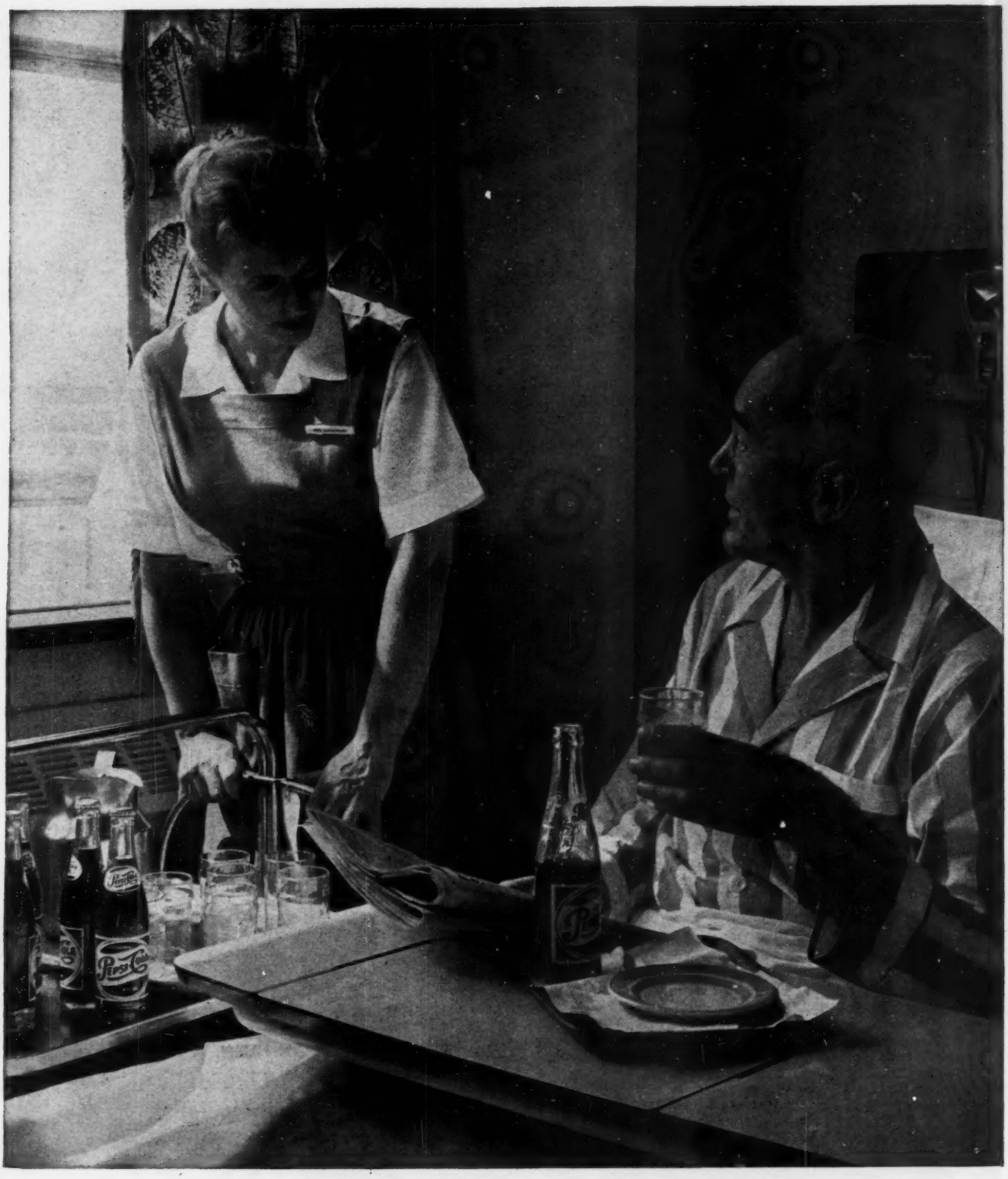
Literature on request *Detroit 11, Michigan*



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*Moravec, C. L., and Moravec, M. E.: New York J. Med. *55*:2775, 1955.

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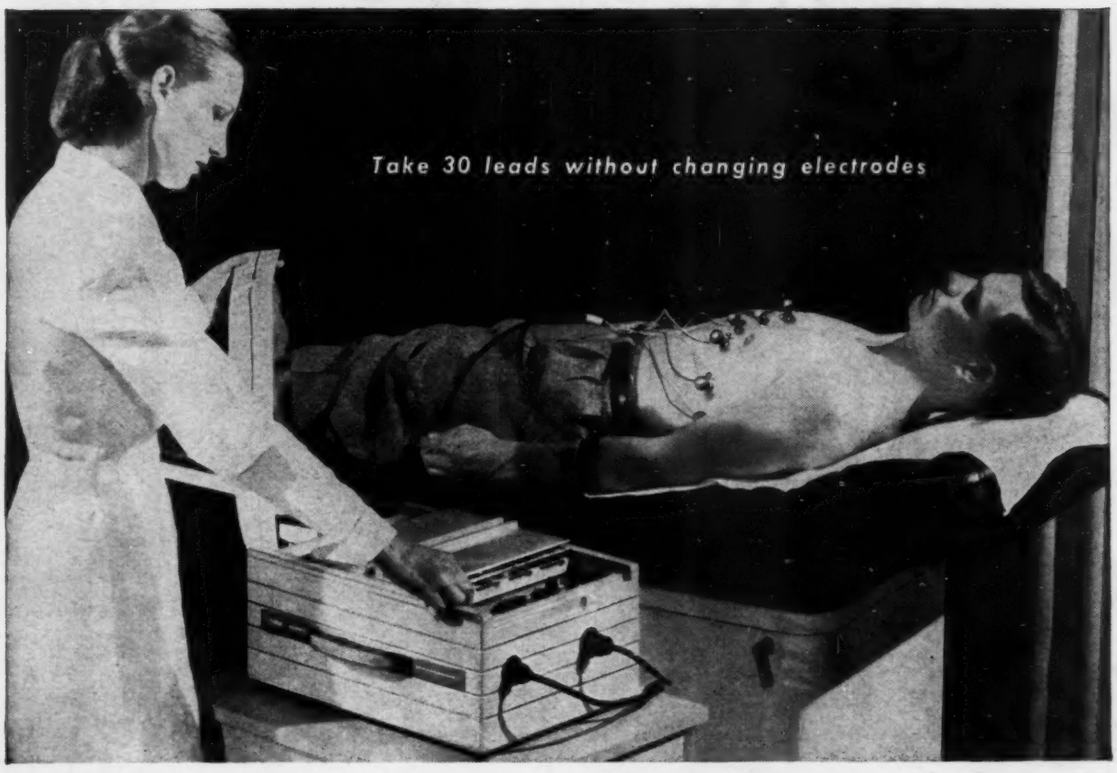

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references: (1) Smith, R. T.; Kron, K. M.; Peak, W. P. and Herrmann, I. F.: J.A.M.A. *160*:745 (Mar. 3) 1956. (2) Settel, E.: Am. Pract. & Digest Treat. *9*:443 (March) 1957. (3) Batterman, R. C., and Grossman, A. J.: Federation Proc. *15*:316 (March) 1956.

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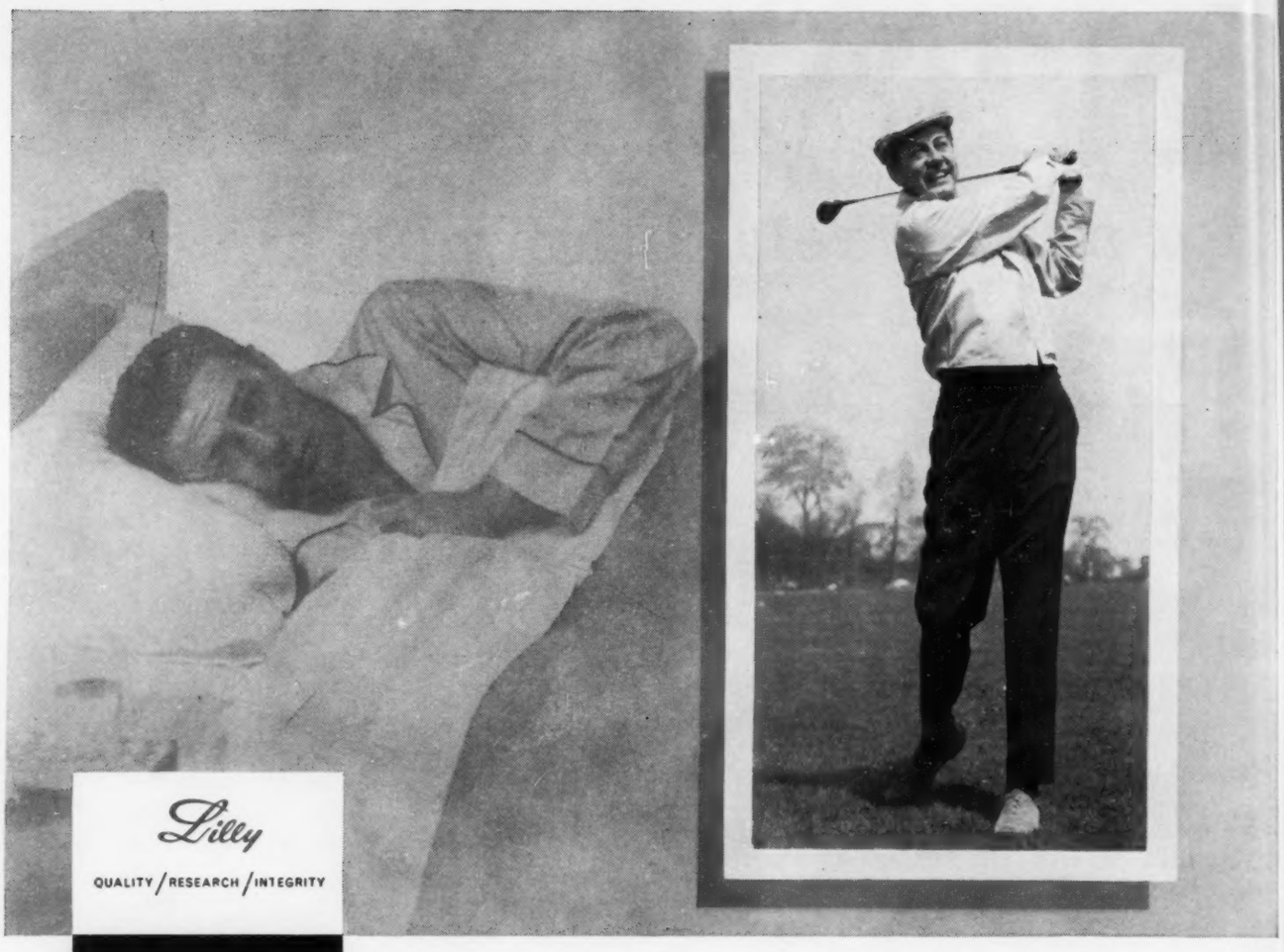

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PREOPERATIVE SEDATION AND PRODUCTION OF A QUIESCENT STATE IN CHILDREN

PROMETHAZINE-MEPERIDINE-SCOPOLAMINE SEDATION

Max S. Sadove, M.D.
and
Theodore J. Frye, M.D., Chicago

• *Previous experience with 3,000 surgical cases showed that meperidine and promethazine together were an extremely satisfactory combination for use as premedication for anesthesia. A method for administering them was evolved from this experience and was applied uniformly in a special series of 200 consecutive pediatric cases. Promethazine, 1.1 mg. per kilogram of body weight (0.5 mg. per pound), was injected intramuscularly 60 to 90 minutes before induction of anesthesia; meperidine in the same dosage was given intramuscularly 30 to 60 minutes before induction. Scopolamine in doses ranging from 0.1 to 0.43 mg. (1/650 to 1/150 grains) according to the body weight was given with the meperidine. This premedication sufficed to eliminate all signs of dread in 93% of the children, suppressed motor activity in 92%, induced sound sleep in 12%, and eliminated all reactions to the environment in 80%. The over-all effect, in the opinion of the anesthesiologist, was that induction was facilitated in 80%, unaffected in 17% and delayed in 3%. There was no cyanosis or vascular depression in any case, and only one of the 200 patients vomited. Since a parallel series permitting comparison with other types of premedication remains to be completed, the authors regard this as a preliminary report.*

Preoperative sedation of children is a difficult problem of great importance, for the psychic trauma consequent to anticipation of surgery may be as great a hazard to the patient as his original disease. Also, in many instances it is questionable whether the risk from preoperative sedatives, administered to relieve apprehension, may not be as great or greater than the risk from the operation itself.

The search for the ideal in preoperative sedation has been pursued for years. No method has been universally accepted, although many surgeons and anesthesiologists have favorite drug combinations that appear to work well in their hands. The drugs used depend to a considerable degree on the disease under treatment, the physical status of the patient, the operative procedure and the anesthetic technique to be employed, and other factors.

The requisites for preoperative medication of children include (1) safety, (2) simplicity (no excessive problems as to administration, timing, or equipment should attend use of the method), (3) wide applicability, (4) facilitation of anesthetization, and (5) adequate quieting action. Ideally, the child should arrive in the operating room without apprehension or fear; a degree of hypnosis or sleep is desirable, without, however, any depression of vital functions, especially those of circulation and respiration.

The method should be free of untoward effects, such as occasional overdepression or, at the other extreme, inadequacy of sedative action, nausea, vomiting, and constipation. Definite predictability of effect is necessary, so that the percentage of failures per unit number of cases will be minimal.

In the past the entire range of drugs of a sedative type have been used for premedication in children. With the exception of potent narcotic agents, all have been tried and found useful in some cases but not satisfactory for a large percentage of children. Bromides, chloral hydrate, and paraldehyde have been used by many but have failed to approximate the ideal in preoperative sedation.

The avenues of administration employed have included the oral, the intramuscular, the intravenous, and the rectal. Medication by the oral route may be suitable for sedation in other branches of medicine, but it increases the hazard of regurgitation or vomiting

From the Department of Surgery, Division of Anesthesiology, University of Illinois Research and Educational Hospitals.

if used in the preoperative period. In a frightened child, absorption of a medicament from the intestine may be slow.

The sedatives most commonly employed today are the barbiturates of ultrashort, short, and intermediate duration of action, supplied in the form of capsules, suppositories, and solutions and suspensions administered parenterally or by rectum. The ultra-short-acting or the short-acting barbiturates, administered rectally, have proved useful. However, with medication by the rectal route there is always the possibility that the drug may be expelled or may not be absorbed or that absorption will be prolonged beyond the period when sedation is required. Side-actions, such as slight to severe depression of circulation or respiration or both, have occurred, as well as long-continued somnolence in the postoperative period, and have been definite deterrents. The problems of rectal administration in many instances are so troublesome as to render such methods impractical.

Intramuscular or oral administration of various barbiturate compounds has become rather popular in recent years. However, it is difficult to ascertain the correct dose of barbiturate for a particular child to provide a predictable degree of sedation. It has become common practice, therefore, to use slightly more than the conventional dosage; thus, failures are relatively few, but the incidence of excessive sedation in the postoperative period is increased.

Investigation into Preanesthetic Quiescence

Background of Present Study.—During an investigation of a number of phenothiazine derivatives, among them chlorpromazine, promethazine, and mepazine, over the past three years, the potentiating action of these compounds on narcotics and other commonly used premedicants and on agents used to produce basal anesthesia was observed. More than a year ago use of promethazine in conjunction with meperidine was initiated, and the series was extended to 3,000 cases.[1] The combination proved extremely satisfactory and our confidence in the technique increased. Carefully and cautiously, the study was expanded to include pediatric surgical cases. With accumulation of cases, we evolved a method of administering the various agents in a definite ratio to one another in relation to the body size of the patient. Although records of a large number of cases were by this time available, it was felt that for purposes of accuracy another series should be started.

UNIT NUMBER_____ NAME_____ SEX____ AGE____ WGT.____ PHYSICAL STATUS____ DATE_____

PREMEDICATION: PHENERGAN_____ DEMEROL_____ SCOPOLAMINE_____

SIGNIFICANT HISTORY AND FINDINGS:_____

STATUS OF PATIENT BEFORE ANESTHESIA:

APPREHENSION_____ EXCITEMENT_____ REACTION TO ENVIRONMENT_____ SLEEPING_____ SEDATION_____

ANALGESIA_____ SKIN COLOR_____ SKIN DRYNESS_____ MOUTH_____ RESP. DEPRESSION_____

VASC. DEPRESSION_____ EASE OF HANDLING_____ OTHERS_____

PHASE OF ANESTHISIA	METHOD				COMPLICATIONS										
INDUCTION (to loss of hearing)	Semi-Open	Open	Semi-Closed	Closed	Excitement	Relaxation	Salivation	Vomiting	Arrhyth	Pulse Rate	Blood Pr.	Resp. Irreg.	Analg.	Pers. pir.	Skin Color
MAINTENANCE															
EMERGENCE															
POST IMMEDIATE															

N.B. 1) For excitement, Relaxation, Nausea, Vomiting: Put down 4 for marked; 2 to 3 for moderate; 1 for slight; 0 for none.

2) For Arrhythmias, Pulse Rate, Blood Pressure, Resp. Irreg.: State kind

MAIN AGENTS USED: Barb._____ N_2O_____ Cyclopropane_____ Ether_____ Vinemar_____ Trimar_____

RELAXANTS: Dm. Cur._____ Succ. Chol._____ Flaxedil_____

DURING:	INDUCTION	No Change_____	Helped_____	Moderate_____	Profound_____	Unknown_____
	MAINTENANCE	No Change_____	Helped_____	Moderate_____	Profound_____	Unknown_____
	EMERGENCE	No Change_____	Helped_____	Moderate_____	Profound_____	Unknown_____

AMOUNT OF MAIN ANESTHESIA: LESS_____ SAME_____ MORE_____ UNKNOWN_____

Phenergan: Helpful_____ Not helpful_____ Unknown_____

ANESTHESIOLOGIST

Work sheet in preoperative sedation of children with combination of promethazine, meperidine, and scopolamine.

Plan of Investigation.—The present study was undertaken to evaluate the efficiency of the promethazine-meperidine-scopolamine combination for preoperative medication of children. Two hundred consecutive cases were carefully evaluated. A work sheet (see figure), similar to those used previously, was completed for each patient. In this study the use of promethazine in 25-to-50-mg. doses given orally the evening preceding surgery has provided adequate restful sleep and has eliminated the need of barbiturates in most cases.

Dosage.—All patients under 12 years of age received routine preoperative medication computed on the basis of body weight and administered without regard to physical status, operative risk, or anesthetics to be used (see table). Promethazine, 0.5 mg. per pound, was injected intramuscularly 60 to 90 minutes prior to induction; meperidine, 0.5 mg. per pound, and scopolamine (see table) were administered by the intramuscular route 30 to 60 minutes prior to initiating anesthesia.

Results

Results were evaluated according to the sum total of apprehension, excitability, and reaction to environment of the patient and the over-all quiescence achieved. Each factor in the emotional condition of the patient was appraised, since certain drug combinations may alter some factors without influencing others; yet, each must be considered an integral part of the entire response to sedation. The anesthesiologist was instructed to be as objective as possible in each case. It was our desire not only to record the absence or the presence of the various physiological and psychological phenomena but also to evaluate the degree to which the various reactions were present. The psychophysiological functions involved were therefore graded by a numerical system (see figure). Naturally, our interest was centered on the degree of preoperative sedation and quiescence attained.

Apprehension.—A state of fear or dread within the individual was not discernible in 93% of the patients, was slight in 4%, and was severe in 3%. When there are considered such factors as the type of patients comprising the series, the economic strata from which they came, and the fact that many of them were hurried into the hospital immediately prior to the time of induction, the effectiveness of the premedication for prevention or relief of apprehension was impressive.

Excitement.—Motor activity, especially as an expression of fear and apprehension, was absent in 92% of the patients, was slight in 4%, and was moderate to severe in 4%. This drug combination may be considered very effective in preventing excitement, particularly when it is realized that most of the patients in this series were treated under clinical conditions common to a large active service in a metropolitan area; in many instances, because of the extremely heavy work load, timing of the premedication could not be ideal.

Sleep Before Induction.—The presence or absence of sleep prior to induction was observed. (With other types of premedication, sleep is essentially synonymous with adequate sedation.) In this series, less than half of the patients were asleep or in a sleep-like state on arrival in the operating room; only 12% were soundly asleep, and 30% were sleeping intermittently. Thus, the majority (58%) were fully conscious but quiet and tractable immediately prior to induction.

Sedation and Quiescence.—Sedation and quiescence were evaluated on the basis of the sum total of all observable phenomena indicating psychomotor depression. Seventy-three per cent of the patients were moderately to profoundly sedated, 22% were slightly sedated, and 5% showed no sedation. In the over-all assessment of the sedative response, it was estimated that the quiescence produced was adequate in 92%.

Reaction to Environment.—Reaction to the operating-room environment is an excellent indication of the true sensitivity of the individual to his surroundings. The quiescence of the patient was severely tested during the positioning on the table, injection of drugs, placement of the needle for intravenous injection, starting of the infusion, and other necessary manipulations immediately prior to induction. Under many forms of preanesthetic medication, a child may appear to be adequately sedated; yet, he may "break through" when he is manipulated in any way, as during the routine preparations in the operating room.

Routine Dosage of Promethazine, Meperidine, and Scopolamine Computed on Basis of Body Weight

Age	Weight, Lb.	Promethazine, Mg.	Meperidine, Mg.	Scopolamine, Grains
Up to 2 mo.	7-10	3.5- 5.0	3.5- 5.0	1/650
2-4 mo.	10-14	5.0- 7.0	5.0- 7.0	1/450
4-6 mo.	14-16	7.0- 8.0	7.0- 8.0	1/450
6-12 mo.	16-22	8.0-11.0	8.0-11.0	1/450
12-18 mo.	22-25	11.0-12.5	11.0-12.5	1/400
18-24 mo.	25-27	12.5-13.5	12.5-13.5	1/400
2-3 yr.	27-30	13.5-15.0	13.5-15.0	1/300
3-5 yr.	30-40	15.0-20.0	15.0-20.0	1/300
5-8 yr.	40-55	20.0-27.5	20.0-27.5	1/150
8-10 yr.	55-65	27.5-32.5	27.5-32.5	1/150
10-12 yr.	65-80	32.5-40.0	32.5-40.0	1/150

In 80% of the patients in this series there was no reaction whatever to the environment. Sixteen per cent were slightly disturbed, and only 4% registered a moderate to severe protest to the final preparations for operation. The type of premedication used in this series, therefore, is excellent for the purpose of diminishing the reaction of the child patient to environmental stimuli.

Facilitation of Anesthetization.—The evaluation of the ability of this method of preoperative sedation to facilitate anesthetization was based purely on clinical impressions. The phases are listed on the work sheet (see figure) under induction, maintenance, and emergence.

Induction: Induction was facilitated, in the opinion of the anesthesiologist, in 80% of the cases. In 20% the premedication was considered not to be helpful, and in 3% of these there was an impression of actual delay in induction.

Maintenance: Maintenance was facilitated in 90% of the cases, and in 10% no opinion could be expressed as to the value of the premedication. On evaluation of the amount of anesthetic employed in this series, it was the impression that less was required for maintenance in 62% of the cases; in 37.5% the amount re-

quired deviated in no way from the standard, and in only one case (0.5%) did the anesthesiologist feel that more of the agent was required than usual.

Emergence: Many undesirable side-effects from excessive preoperative sedation are seen during emergence from anesthesia, including delay in recovery, excitement, disorientation, panic, nausea, and vomiting. It was to be expected that emergence, in a series of this size, would be delayed in at least a few patients and that for others there would be "no change" or the effects would be recorded as "unknown." However, it was considered that the quiescence produced by the preoperative medication contributed to a smoother, quieter emergence in 80% of the patients; in only 20% was the method noncontributory or the effect unknown.

It is believed that, because less anesthetic was required for maintenance of anesthesia in a high percentage of the patients, emergence was more rapid in these patients, with less hypoxia and other evidences of depression of vital centers than would have occurred with conventional preoperative techniques. It also has been suggested that the potentiating activity of promethazine on the analgesic drug administered before operation may have been carried over into the postoperative period, so that the patient had the benefit of an additional analgesic effect and therefore a more comfortable emergence from anesthesia.

Respiratory Depression.—Potentiation of the depressant effects of the analgesic and anesthetic agents by promethazine was evaluated by clinical observation. We were vigilant for adverse influences on the vital functions, especially when respiratory depressants were used during anesthesia. In 97% of the patients no respiratory depression attributable to the premedication was clinically discernible. Only 3% showed a slight to moderate respiratory depression that might have been remotely related to the preoperative medication.

Vascular Depression.—The children were observed for changes in peripheral pulse rate, blood pressure, capillary refill time, and other phenomena indicating alteration of the circulatory mechanism. None showed any indication of vascular depression. Skin color was watched with particular attentiveness, because peripheral cyanosis has occurred in adults under premedication with a phenothiazine compound but has not been seen in children. None of the patients in this series became cyanotic, and in only one was the skin color in any way unsatisfactory. This child, who had multiple congenital deformities and relative anemia and had had a number of previous operations, showed pallor prior to induction.

Vomiting.—Throughout the entire period of observation vomiting occurred in the case of only one patient (0.5%) in the immediate postoperative period. This is a noteworthy finding, since a greater incidence of emesis would ordinarily be expected in a series of 200 patients. The rarity of vomiting in this series certainly is an indication of the antiemetic properties of promethazine. Also, an important factor in the control of emesis was the smoother maintenance of anesthesia with less amount of anesthetic, and a consequent reduction of hypoxia and vital depression. Local tolerance to the intramuscular injection of promethazine was excellent. There was no pain on injection and no evidence of local tissue reaction.

Comment

Final Evaluation.—In the final summation of the usefulness of promethazine in premedication, the anesthesiologist indicated on the work sheet his opinion as to the helpfulness or the lack of helpfulness of the compound. Promethazine was considered definitely helpful in 85% of the cases, was felt not to be helpful in 2%, and in 13% no conclusion as to the over-all value of the drug could be reached.

Additional Observations.—If sedation is inadequate, patients tend to show overactivity in the postoperative period. Prior to inception of this series, it was observed in routine work of the operating room, and confirmed during this study, that, if small divided doses of approximately 0.5 mg. of promethazine per pound of body weight were administered by slow intravenous injection, an excellent state of general quiescence without vital depression developed within 10 minutes. The patient became cooperative, responded to the spoken word, and was easily manageable, in contrast to the previous situation.

Summary and Conclusions

In a clinical evaluation of the preoperative sedation and quiescence produced by a combination of promethazine, meperidine, and scopolamine administered to 200 children in dosage determined by body weight, various psychophysiological phenomena were closely observed and tabulated. The study has been based on clinical observations. As such, it is fraught with the hazards common to all studies of this type. It is now being expanded under more controlled conditions. Our justification for publishing the study, prior to the completion of the controlled study, is our sincere belief that, although the percentage of various conclusions may change, the over-all individual conclusions will remain valid.

Observations were made of the effect of promethazine-meperidine-scopolamine premedication on anesthesia and the postoperative period. According to these observations, respiratory depression of a clinically discernible type was rare and mild, being present in only 3% of the patients. Vascular depression was not observed. Vomiting in the operative and postoperative periods was markedly diminished to the degree of being almost nonexistent. The amount of anesthetic required to obtain and maintain adequate anesthesia was diminished in more than half of the cases.

Inasmuch as more than 90% of the children were free from apprehension through use of the preoperative sedation, this psychic factor was practically eliminated. Excitement or motor activity, especially as an expression of fear, was present in less than 10% of the patients. Reaction to hospital and particularly operating-room environment (which is one of the phenomena that best measures the efficiency of pre-

operative medication) indicated that more than 80% of the children were excellently tranquilized. Actual sleep or sleep-like state was present in a little less than 50% of the cases. Sedation was adequate in all but 5%.

As to final evaluation, in more than three-fourths of the patients anesthetization was facilitated as to induction, maintenance, and emergence from anesthesia by means of preoperative sedation with promethazine, meperidine, and scopolamine. It was the opinion of the anesthesiologists that this drug combination was helpful in approximately four-fifths of the cases studied.

840 S. Wood St. (12).

The promethazine used in this study was supplied as Phenergan by Wyeth Laboratories, Philadelphia; the meperidine used was supplied as Demerol by Winthrop Laboratories, New York.

Reference

1. Sadove, M. S.: Promethazine in Surgery: Preliminary Report, J. A. M. A. **162:**712-715 (Oct. 20) 1956.

MICROCOCCIC (STAPHYLOCOCCIC) INFECTIONS IN A GENERAL HOSPITAL

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• *Micrococcic infections resulting from cross infection within hospitals may be the most serious current communicable disease problem. Micrococci are remarkably well adapted for cross infection in a hospital environment, remaining viable and even virulent in a dried state on dust or bedding. Any break in the skin, surgical or traumatic, including that made by intravenous catheters, appears to open the way for micrococcic invasion, and in infants invasion may take place through normal, intact skin. Hospital-acquired infections seem largely preventable, and the application of control measures including isolation of hosts and sterilization of vectors must be put into effect.*

Micrococcic (staphylococcic) infections of hospitalized patients are a subject of increasing concern to the medical profession. Reports have appeared in Canadian, British, and Australian literature implicating micrococci in certain types of hospital-acquired infections, such as surgical wound infections,[1] impetigo neonatorum, and maternal breast abscesses.[2] Similar studies have been published in the United States.[3]

Though specific types of micrococcic infection have been reported, there is no current description in medical literature of the scope of the problem of such infections in a general hospital. Information is not available concerning the approximate incidence of such infections, nor is a description of the types of infections commonly encountered and their severity. Such data are valuable in order to provide perspective to the problem, to stimulate investigation of various means of control, and to permit evaluation of preventive measures. With these objectives in view, data were collected in the King County Hospital from Nov. 16, 1955, through February, 1956, and serve as the basis of this report.

Methods and Materials

All hospital patients with newly acquired micrococcic infections proved by culture were followed in this study. The principal method utilized was the investigation of every culture positive for micrococci, which was routinely isolated by the hospital laboratory, in order to determine its source, the clinical condition of the patient, the time of onset of infection, and other data. With the information thus gained, it was generally possible to determine whether the source of the culture was a clinically significant micrococcic infection or if it had been derived from some other source, such as a nasal carrier of micrococci.

Patients were included in this study only if they had definite clinical infections from which coagulase-positive micrococci were isolated in large numbers. Patients who had multiple micrococcic infections were listed only once. Such patients were classified by what appeared to be the most serious of their infections. Coagulase-negative micrococcic isolations were disregarded. Patients who had chronic micrococcic infections acquired prior to the study were not counted in tabulations, though many cultures from such patients were obtained during the study. Fifteen of these patients were investigated and are considered separately in the text.

It was found that patients with recently acquired micrococcic infections fell into one of three fairly distinct and significant groups: (1) those who acquired their infections outside the hospital and who were admitted or were seen in the outpatient department; (2) those in whom no evidence of infection was present on hospital admission but who developed infections one or more days after admission; and (3) those whose infections appeared within 60 days after discharge from the hospital. Six hospital employees who developed micrococcic skin infections are included in the group of patients whose infections appeared while in the hospital. Seven patients who apparently acquired infections in other hospitals are not listed.

During the period of the study and for approximately one month thereafter, all deaths among patients in the series were noted and reviewed in detail with a pathologist to determine the relationship, if

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any, of the micrococcic infection to the patient's death. Only those deaths in which the infection appeared to play a significant role are included in this report.

The sensitivities of micrococci to antibiotics were tested by the disk diffusion technique, described elsewhere.[4] Antibiotics used in determining sensitivities were tetracycline, chloramphenicol, streptomycin, penicillin, erythromycin, and bacitracin. For the purposes of this study, organisms moderately or markedly resistant to an antibiotic were regarded as resistant to that antibiotic.

TABLE 1.—*Types of Micrococcic Infections Found Among 189 Patients from Nov. 16, 1955, Through February, 1956.*

Type Major Micrococcic Infection	Total No.	Micrococcic Infections Group 1†	Group 2	Group 3	Deaths* Group 1	Group 2	Group 3
Surgical wound	37	1	26	10	...	5	1
Pneumonia	14	2	12	...	...	8	...
Septicemia	7	1	6	...	1	3	...
Skin infection							
Infants	29	3	18	8	...	...	...
Adults	50	29	17	4	...	2	...
Breast abscess							
Infants	3	...	2	1	...	...	...
Mothers	6	...	2	4	...	...	...
Infection of burns	6	1	5	...	...	1	...
Miscellaneous infections	37	20	12	5	1	2	...
Total	189	57	100	32	2	21	1

* Does not include several deaths among infected patients whose death did not appear related to micrococcic infection.
† Group 1, infections acquired outside hospital; group 2, infections appearing during hospitalization; group 3, infections appearing after discharge.

Bacteriophage typing of a sample of micrococci was performed by Major George Navarre, Branch Sixth Army Area Medical Laboratories, Fort Lewis, Wash. Major Navarre utilized 26 bacteriophages, the majority of which were derived from the reference strains of Dr. John Blair, New York City.

Results

One hundred eighty-nine patients developed micrococcic infections from which material was cultured during the period of this investigation. The number of infections occurring each month was relatively constant and was in the order of 55 per month.

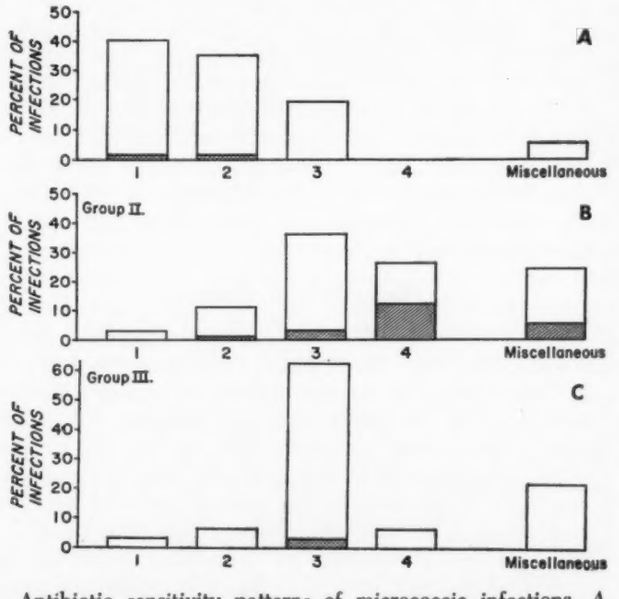
Table 1 summarizes the types of micrococcic infections in each of the above-mentioned three groups—group 1, those acquired outside the hospital; group 2, those developing during hospitalization; and group 3, those appearing after discharge.

Group 1, Infections Acquired Outside Hospital.—Fifty-seven infections, comprising 30% of the total, were acquired outside the hospital. The majority of these were skin infections of adults, including many carbuncles and infected abrasions or lacerations treated in outpatient clinics. The bulk of the remaining infections in this group, classified as miscellaneous, is comprised largely of urinary tract infections, otitis media, conjunctivitis, and lymphadenitis.

Such infections acquired outside the hospital were usually not severe. This is reflected by the relatively low mortality rate of about 4%. Micrococcic septicemia was presumably responsible for the two deaths which occurred in the group. One of the patients who died was a 77-year-old diabetic woman. She had been febrile when admitted, and died two days later. A Micrococcus sensitive to all antibiotics was cultured from her blood. The other patient had entered with symptoms of septicemia and meningitis after a short history of severe, spiking fever, preceded by persistent carbuncles for several weeks. Culture of his spinal fluid was positive for micrococci resistant only to penicillin. He died on the day after admission. At autopsy, miliary micrococcic abscesses were found in several organs, including the kidneys and brain. Since no positive blood culture was obtained from this patient, he is listed in the miscellaneous column in table 1.

The resistance to antibiotics of infections in group 1 represents the antibiotic resistance of micrococcic infections in outpatients of the King County Hospital. Forty per cent of these infections were caused by organisms sensitive to all antibiotics, and 35% were resistant only to penicillin (table 2 and the figure). Nineteen per cent were resistant to tetracycline, streptomycin, and penicillin, a pattern frequently seen in hospital-acquired infections. In several instances of infections with this resistant pattern, other members of the patient's family had recently been hospitalized, thus suggesting that the hospital may have been the indirect source of some of the infections in this group.

Group 2, Infections Appearing During Hospitalization.—Infections appearing during hospitalization, totaling 100, made up the majority of infections encountered. These micrococcic infections appeared as early as the second day of life in a newborn infant and, in the extreme case of a convalescent poliomyelitis patient, 13 months after admission. For those patients for



Antibiotic sensitivity patterns of micrococcic infections. *A*, Group 1 (57 infections), those acquired outside the hospital; *B*, Group 2 (100 infections), those appearing during hospitalization; *C*, Group 3 (32 infections), those appearing after hospital discharge. 1 stands for sensitivity to all antibiotics; 2, resistance only to penicillin; 3, resistance to tetracycline, streptomycin, penicillin; 4, sensitivity only to bacitracin; and miscellaneous, other resistance patterns. The shaded areas indicate deaths.

whom the interval from admission to the onset of infection could be clearly determined, the median interval was 10 days.

Twenty-six infections, a quarter of the group, were surgical wound infections. Such infections most often appeared in the relatively avascular tissues of elderly patients, but infections also occurred in young and apparently healthy persons. Five patients with surgical wound infections died. In each of the deaths, the wound infection was a contributing factor or major cause of death.

In 12 known instances, pneumonia was the major micrococcic infection. The pathological picture in fatal cases was usually bilateral bronchopneumonia of the lower lobes. In severe cases, the pneumonia was necrotizing and hemorrhagic, occasionally with abscess formation. In several fatal cases of pneumonia with this pathological picture, material was not taken for culture at autopsy; thus these cases are not included in the statistics of this report. Also, several patients dying with other micrococcic infections appeared to have micrococcic pneumonia as a terminal complication. It is probable that the incidence of micrococcic pneumonia is considerably higher in this hospital than these data indicate.

Of the 12 patients with pneumonia who are listed, eight died. All of them were debilitated by degenerative diseases or by serious trauma. In six instances the lung infection was preceded by cerebral injury with coma.

In the entire study, 12 patients were seen with blood cultures positive for micrococci; of these, 6 died. Eleven of the patients with bacteremia had micrococcic infections that appeared during hospitalization. In five such instances of bacteremia, a major micrococcic infection was present, such as pneumonia or a wound abscess, which was considered the source of the disorder. The condition of those patients who had positive blood cultures without an obvious source of the disorder is classified as septicemia. Six of the patients with "primary" septicemia are listed in group 2; three of them died. In these cases of primary septicemia, there appears to be a suggestive epidemiologic relationship to intravenous therapy. All of these patients had received fluids intravenously. More significantly, a femoral catheter had been used in one case, a venous "cut-down" in two, and in one continuous intravenous therapy had been given from admission until death. Intravenous therapy may well provide a way for micrococci in a patient's environment to enter his blood stream.

Eighteen skin infections of infants occurred during this investigation in group 2. In addition, two breast abscesses occurred in mothers and two in infants. These were a portion of a prolonged outbreak of micrococcic infections originating in the nursery. Infections of infants appeared usually as pustules, infected blebs, or furuncles. Nearly all of these infections in infants and mothers had identical antibiotic sensitivities, with resistance to tetracycline, streptomycin, and penicillin. Several infections were severe enough to require readmission to the hospital or prolongation of the postpartum or neonatal hospitalization period by several days. No deaths occurred, however, in this group.

Skin infections of adults, including infected decubitus ulcers, infections of burns, and the miscellaneous group of infections, including those of the urinary tract, comprise the remainder of infections appearing in hospitalized patients. Two of the adults with skin infections died, probably as a result of septicemia in both cases, though positive blood cultures were not obtained. The two deaths occurring in the group with miscellaneous infections were both in patients with severe micrococcic parotitis.

The severity of infections in group 2 is reflected by the mortality rate of patients in this group (tables 2 and 3). Of the 100 patients in the group, 21 died. In each of these 21 deaths, the micrococcic infection played a role—a major or determining role in 15 cases. The mortality rate in this group was 21%, as compared with the mortality rate of less than 4% for infections acquired outside the hospital (table 2). The over-all mortality rate in groups 2 and 3, considering only deaths related to micrococcic infection, is 17% (22 deaths out of 132 cases).

The severity and prolonged morbidity of certain micrococcic infections is also evidenced by 15 patients who had developed chronic infections prior to this study. Twelve of the patients evidently had developed their infections while in this hospital. These micrococcic infections had persisted for periods varying from 4 days to 4.5 years before the initiation of this study, averaging 10.5 months in duration. Six of the patients, including three with postsurgical osteomyelitis, had required several months of hospitaliza-

TABLE 2.—*Antibiotic Sensitivity Patterns of Micrococcic Infections*

	Types of Infection											
	Group 1*				Group 2				Group 3			
	Infection		Deaths		Infection		Deaths		Infection		Deaths	
Sensitivity Pattern	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sensitive to all antibiotics	23	40.4	1	1.8	3	3.0	...	...	1	3.1	...	...
Resistant only to penicillin	20	35.1	1	1.8	11	11.0	1	1.0	2	6.2	...	...
Resistant to tetracycline, streptomycin, penicillin	11	19.3	...	...	36	36.0	3	3.0	20	62.6	1	3.1
Sensitive only to baciracin	...	...	...	...	26	26.0	12	12.0	2	6.2	...	...
Other resistance patterns	3	5.2	...	...	24	24.0	5	5.0	7	21.9	...	...
Total	57		2	3.6	100		21	21.0	32		1	3.1

* See table 1 for explanation of groups.

tion because of their infections. Even when such patients were not hospitalized, their infections appeared to cause considerable disability and economic loss.

The susceptibility to antibiotics of organisms causing infections occurring in the hospital contrasted sharply with the antibiotic sensitivity of organisms causing infections acquired outside the hospital (table 2 and the figure). The organisms causing only 3% of the infections which appeared in the hospital were sensitive to all antibiotics, and those causing 11% were resistant only to penicillin. The organisms causing 36% were susceptible to chloramphenicol, erythromycin, and bacitracin and resistant to tetracycline, streptomycin, and penicillin. The organisms cultured in 26% of the infections were sensitive only to bacitracin. A remarkably high mortality rate of 46% (12 deaths out of 26 cases) was observed in patients with infections caused by organisms susceptible only to bacitracin.

The remaining 24% of hospital-acquired infections were caused by organisms with various other patterns of antibiotic resistance. Most of these were resistant to two or more antibiotics.

TABLE 3.—*The 24 Deaths Among 189 Patients with Micrococcic Infections*

Case No.	Age, Yr.	Service	Date Death	Clinical and Pathological Diagnosis	Source of Culture	Source of Infection*	Relationship of Micrococcic Infection to Death		
							Contributing Factor		Major Cause
							Minor	Major	
1	19	Surgery	11/23/55	Third-degree burns, head, neck, trachea, major bronchi, and hands; micrococcic bronchopneumonia and septicemia	Blood	Hospital		X	
2	70	Surgery	11/25/55	Depressed skull fracture with subdural hematoma and multiple cerebral contusions; infection of fracture site; bronchopneumonia; chronic alcoholism; status epilepticus	Infection of scalp at fracture site	Hospital	X		
3	86	Surgery	12/11/55	Perforated peptic ulcer; wound dehiscence; localized peritonitis	Peritoneal cavity	Hospital	X		
4	38	Surgery	12/14/55	Idiopathic epilepsy; coma of unknown etiology; aspiration pneumonia with superimposed severe bilateral micrococcic bronchopneumonia and lung abscess	Left lung	Hospital		X	
5	87	Surgery	12/15/55	Myocardial infarctions, old and recent; decubitus micrococcic abscess, hips and sacrum, with probable terminal septicemia; cellulitis, left arm	Decubitus ulcer; septic liver	Hospital		X	
6	82	Medicine	12/19/55	Acute pyelonephritis; septicemia; abscesses of kidney and ribs; empyema	Rib abscess	Hospital		X	
7	75	Surgery	12/24/55	Metastatic carcinoma of colon; acute suppurative bilateral micrococcic parotitis	Parotid abscess	Hospital	X		
8	47	Medicine	1/ 2/56	Acute myeloblastic leukemia; pneumonia in left upper lobe; micrococcic septicemia; gastrointestinal bleeding	Blood	Hospital		X	
9	87	Medicine	1/ 2/56	Acute pancreatitis with suppuration; micrococcic septicemia with multiple abscesses	Blood; urine; abdomen; rib cage	Hospital		X	
10	54	Surgery	1/ 4/56	Third-degree burns of 40% of trunk and neck; micrococcic infection of burn sites	Burn infection	Hospital		X	
11	59	Surgery	1/ 5/56	Multiple fractures of skull, pelvis, and legs; confluent micrococcic bronchopneumonia and septicemia	Sputum; blood	Hospital		X	
12	90	Medicine	1/23/56	Adenocarcinoma of stomach; bilateral micrococcic bronchopneumonia	Lung exudate	Hospital	X		
13	83	Medicine	1/23/56	Empyema of gallbladder with rupture and abscess formation; lipid pneumonia with superimposed acute micrococcic bronchopneumonia, bilateral	Bronchial tree	Hospital	X		
14	68	Surgery	1/31/56	Fracture of hip with open reduction; large abcess at operative site; myocardial infarction	Hip abscess	Hospital		X	
15	81	Surgery	2/ 4/56	Adenocarcinoma of colon, resected; micrococcic infection of abdominal wound; micrococcic peritonitis; micrococcic bronchopneumonia, bilateral, necrotizing; transitional cell carcinoma of bladder; encephalomalacia	Wound infection; lung	Hospital		X	
16	71	Medicine	2/ 5/56	Chronic pyelonephritis; massive terminal micrococcic bronchopneumonia	Lung	Hospital		X	
17	56	Medicine	2/ 7/56	Chronic alcoholism with superior hemorrhagic polioencephalitis (Wernicke's disease); micrococcic bronchopneumonia on right, probably secondary to aspiration	Lung	Hospital	X		
18	91	Surgery	2/ 7/56	Generalized arteriosclerosis; diabetes mellitus; peripheral gangrene; micrococcic infection of amputation stump	Wound infection at amputation site	Postdischarge	X		
19	77	Medicine	2/10/56	Micrococcic septicemia with septic thromboses of superior mesenteric and cerebellar arteries; diabetes mellitus with mild acidosis	Blood	Outside			X
20	40	Medicine	2/14/56	Furunculosis; micrococcic septicemia with miliary abscesses; micrococcic meningitis; bronchopneumonia	Spinal fluid	Outside			X
21	74	Surgery	2/18/56	Diabetic gangrene of right leg with multiple amputations and micrococcic wound infections; micrococcic bacteremia	Wound infections; knee joint; blood	Hospital			X
22	86	Medicine	2/23/56	Micrococcic parotitis; micrococcic cellulitis of buttocks; gastrointestinal bleeding, source undetermined; chronic brain syndrome	Stensen's duct	Hospital		X	
23	58	Medicine	2/26/56	Cerebral vascular accident; dysphagia; bilateral micrococcic bronchopneumonia of lower lobes	Lung	Hospital		X	
24	48	Surgery	3/ 3/56	Peripheral arteriosclerosis; multiple arterial grafts; micrococcic wound infections with septicemia	Wound infections; pus in peritoneal cavity	Hospital			X

* Outside refers to those infections acquired outside hospital; Hospital, to those appearing during hospitalization; Postdischarge, to those appearing after discharge.

Group 3, Infections Appearing After Discharge.—The third major group of micrococcic infections is composed of those appearing after discharge from the hospital. Thirty-two patients had infections in this group. Their infections became evident from 2 to 60 days after discharge. Ten of these patients had infections of surgical wounds; one of them died of a wound

abscess while in a convalescent hospital. Skin infections of eight infants and the breast abscesses of four mothers and one infant comprise most of the remainder of the group.

The antibiotic-resistance pattern of the causative organisms in this group of infections is similar to that for the infections appearing in hospitalized patients (table 2 and the figure). In only 3 of the infections (9%) was there no antibiotic resistance or resistance only to penicillin, in contrast to 43 (75%) of the infections acquired before hospital admission. The remaining 91% of infections appearing after discharge were caused by organisms moderately to markedly resistant to antibiotics. The majority (62%) of the organisms were sensitive only to chloramphenicol, erythromycin, and bacitracin.

Bacteriophage Typing

Bacteriophage typing of a sample of cultures from micrococcic infections was utilized to investigate the possibility that one or two strains were causing the majority of infections. Micrococci isolated from the infections of 58 of the patients in this series, predominantly during January, 1956, were subjected to bacteriophage typing.

It is apparent from table 4 that, at least during the month of January, no single bacteriophage type was responsible for a majority of infections. Forty per cent of the cultures were not typable with the bacteriophages used. Twenty-four per cent, or 14 isolations of micrococci, were typed in 9 different phage patterns. One of these patterns (53/54/77/VA4) appeared three times, three patterns appeared twice, and each of the other five patterns was observed only once.

The remaining 36% of infections, however, were evidently caused by the same bacteriophage type of Micrococcus, type 52/42B/44A. Micrococci of this bacteriophage type appear to have caused many recent outbreaks of micrococcic infections in nurseries in the United States.[5] In this hospital, 8 of the 21 isolations of this bacteriophage type were cultured from material drawn from the infections in newborn infants or their mothers. Thirteen strains of micrococci of this type appeared in other groups of patients, including a culture from the blood of an adult who died of micrococcic septicemia. Seven of the isolations of this bacteriophage type occurred in persons who evidently acquired their infections outside the hospital.

It was of interest to note the relationship of bacteriophage types to antibiotic sensitivity patterns. Of the 21 cultures of bacteriophage type 52/42B/44A, 16 had the same antibiotic sensitivity pattern—resistance to tetracycline, streptomycin, and penicillin and sensitivity to chloramphenicol, erythromycin, and bacitracin. Comprising half of these 16 were the 8 from infections whose source appeared to be the nursery. Three micrococcic isolates of this bacteriophage type were sensitive to all antibiotics tested, and two were resistant to all antibiotics except bacitracin. No other correlations were evident between antibiotic sensitivity and bacteriophage type, with the possible exception that, of nine cultures sensitive only to bacitracin, six were nontypable.

Source of Infection

The source of the micrococci causing infection within the hospital is a subject of critical importance. It has been suggested that those hospitalized patients who acquire micrococcic infections are normal carriers of coagulase-positive micrococci, which are harmless during normal activities but are enabled to produce clinical disease because of a change in the patient's resistance after entering the hospital, e. g., through surgical incision of the skin or from the results of prolonged bed rest, such as the pooling of secretions in the lungs or pressure necrosis of cutaneous areas.

However, this appears unlikely in this study, since the antibiotic-sensitivity patterns of micrococci isolated from infections acquired within the hospital were found to be strikingly different from that of micrococci causing infections acquired outside the hospital. In another recent study, to be published separately, we found that none of 118 newly admitted patients were demonstrably nasal or skin carriers of micrococci resistant to antibiotics other than penicillin. It would seem quite improbable that patients who developed infections in the hospital entered the hospital carrying highly resistant micrococci. Thus, on the basis of this indirect evidence, one may presume that the micrococci causing infections of hospitalized patients are different from those which the patients may have carried into the hospital, differing at least in their sensitivity to antibiotics.

It is reasonable to consider whether antibiotic therapy of the hospitalized patient could account for this difference by inducing antibiotic resistance in bacteria normally carried by the patient. If this were true, it would be essential that antibiotic resistance develop very rapidly in order to account for the early appearance of infections due to antibiotic-resistant strains. The median interval from admission to signs of infection was only 10 days in this study. Also, it would be expected that the type of antibiotic resistance should bear a close correlation to antibiotics

TABLE 4.—*Distribution of Bacteriophage Types by Type and Source of Infection*

Type of Infection Cultured	Bacteriophage Types: 52/42B/44A Group 1*	52/42B/44A Group 2	52/42B/44A Group 3	Other Types Group 1	Other Types Group 2	Other Types Group 3	Nontypable Group 1	Nontypable Group 2	Nontypable Group 3	Total
Surgical wound	...	...	2	...	1	1	...	7	3	14
Pneumonia	...	...	...	...	1	...	...	2	...	3
Septicemia	...	1	...	...	2	...	...	1	...	4
Skin infection										
Infants	1	4	2	...	1	...	...	...	1	9
Adults	4	2	...	4	1	...	4	2	...	17
Breast abscess										
Infants	...	1	1	...	...	...	...	...	...	2
Mothers	...	...	...	...	...	...	...	...	...	...
Infection of burns							1	1	...	2
Miscellaneous infections	2	...	1	2	1	...	...	1	...	7
Total	7	8	6	6	7	1	5	14	4	58
		21			14			23		

* See table 1 for explanation of groups.

the patient had received. Neither of these conditions has been found to exist, either in our experience or in that of other investigators. Finland[6] states that the acquisition of increased resistance to antibiotics during treatment occurs infrequently with most of the antibiotics. Knight and Collins[7] found that patients became nasal carriers of micrococci with antibiotic-sensitivity patterns unrelated to antibiotics the patient had received. They concluded that antibiotic therapy, by eliminating normal, antibiotic-sensitive flora, facilitated colonization of the patient's nasal mucosa by resistant micrococci which are prevalent in the hospital environment.

The mechanisms of mutation and selection of antibiotic-resistant bacteria probably play a major and continuing role in the recruitment of new resistant strains to the population of hospital micrococci. Neither mechanism, however, seems to play an immediate role in most hospital-acquired infections. Instead, most such infections are probably the result of the transmission of antibiotic-resistant strains from patient to patient or from personnel to patient.[8] Studies with bacteriophage typing of micrococci support this conclusion.[6]

Micrococci are remarkably well adapted for cross-infection in a hospital environment. They will evidently remain viable, and may remain virulent, in a dried state or on dust, bedding, or other fomes for months or years.[9] They may reside for long periods in nasal passages of hospital personnel or patients.[10] Once they succeed in producing an infection, they apparently multiply quickly, and, because of failure to isolate most such infected patients, the infecting organisms are probably disseminated in enormous numbers. They may be transferred directly from patient to patient or from patients to personnel on contaminated (though grossly clean) hospital blankets (which are often not laundered for six months or more) serving many patients during this period.[11] Even when laundered, blankets may remain contaminated.[12] Hospital mattresses may be another important reservoir of antibiotic-resistant bacteria.[9] Thus, numerous opportunities for cross-infection of micrococcic infections exist in hospitals and provide an adequate explanation for the prompt appearance of infections resistant to multiple antibiotics. The very fact that most hospital-acquired antibiotic-resistant infections are probably the result of cross-infection, however, implies that such infections are largely or entirely preventable.

Over half of the infections reported in this series appeared in hospitalized patients and thus may have been preventable. These were the more serious infections and caused most deaths related to infection. Also possibly avoidable were the 32 infections appearing within 60 days of hospital discharge. Most of the organisms isolated from this group (91%) showed patterns of antibiotic resistance unusual for organisms causing infections acquired before hospital admission and resembling the antibiotic-resistant patterns of organisms isolated in infections appearing in hospitalized patients. The interval of less than 60 days from hospitalization to infection is within what may be termed the latent period of micrococcic infection. Investigations of neonatal micrococcic infections in Seattle and elsewhere, utilizing bacteriophage typing, have produced evidence that micrococcic infections acquired in hospitals may remain latent for several months before producing clinical disease.[13] It is probable that most of the 32 infections appearing within 60 days of hospital discharge were acquired as a consequence of hospital admission.

Comment

The results of this study appear to indicate that, at the present time, micrococcic infections acquired outside the hospital do not merit great concern. An average of 16 such infections, proved by culture, appeared per month, with one death every two months. In contrast, if we include infections appearing within 60 days of discharge, infections evidently resulting from hospitalization in this 350-bed hospital averaged 38 cases per month (4% of the monthly average of 994 hospital admissions and births), with 6 deaths each month related to such infections. If this rate were maintained for a year, there would be a total of 450 cases and 76 deaths. This is nearly equal to the annual incidence of poliomyelitis in the entire state of Washington in the years prior to 1956 (with deaths from poliomyelitis much fewer). Presuming that micrococcic infections are acquired in other hospitals in the state also, it is clear that these infections may be the most serious communicable disease problem in this state—and probably in other states as well.

The tabulation of infections in this study presumably underestimates the actual incidence of micrococcic disease in this hospital. However, since this is a county hospital caring chiefly for indigent patients, it is probable that a far higher proportion of patients are elderly and debilitated than in most private hospitals. Also, crowding of patients tends to be greater in public than in private hospitals. Debilitation and crowding predispose to micrococcic infections. Thus it would be anticipated that the incidence of micrococcic infection in most private hospitals would not be comparable to the incidence encountered during this investigation.

A cause of concern nearly equal to the total incidence of hospital-acquired infections has been the apparently increasing resistance of such infections to antibiotic therapy and the problems of clinical management which have ensued. Until the latter part of 1955, infections caused by organisms sensitive only to bacitracin were virtually unknown in this hospital. Yet in our series of patients whose infections appeared within the hospital or after discharge, over 20% of the organisms cultured were resistant to all of the currently used antibiotics except bacitracin. In this group of 28 patients, 12 deaths occurred, all related to infection (table 2).

In addition to complicating the task of treating micrococcic infection, the appearance of highly resistant organisms decreases the possible value of

prophylactic chemotherapy in the postoperative management of surgical patients. Not only is such chemotherapy likely to selectively permit growth of the more resistant bacteria, but there would currently seem to be less chance for prophylactic therapy to succeed if penicillin, streptomycin, or a tetracycline is used. Reemphasis on strict aseptic technique, including preoperative and postoperative patient care, appears indicated.

This study permits certain generalizations concerning the types of patients most vulnerable to micrococcic infection and thus points out areas in which greatest care is needed. Clearly, any break in the skin, surgical or traumatic, including that made by intravenous catheters, appears to open the way for micrococcic invasion. Debilitated patients, especially those in coma, are evidently unusually susceptible to pneumonia and skin infection. Newborn infants appear to have very little resistance to micrococcic infection, and invasion may take place through normal, intact skin. These considerations should not suggest more prophylactic therapy for susceptible persons but rather greater attention in preventing cross-infection by keeping the patient's environment as free as possible from pathogenic organisms and by careful observation for signs of clinical infection.

This general approach to preventing micrococcic infections may be elaborated in terms of certain specific measures. Micrococcic infections are probably contagious, and consequently patients with such infections should be isolated whenever possible for the protection of both patients and personnel.[14] Contaminated bedding, from which large numbers of micrococci may be disseminated into the air, could serve as an important cause of nasal carriers among personnel,[1a] of micrococcic pneumonia, of skin infections, and of infections of poorly healing wounds. Thus, it would appear that mattresses should be effectively covered and the covers cleaned between change of patients and that blankets should be laundered frequently and preferably sterilized with each laundering. These and other preventive measures have recently been reviewed in greater detail by Starkey [15] and Howe.[3a]

Such measures to control infections have a sound basis in our current knowledge of micrococcic epidemiology. Their application should be encouraged by the realization that hospital-acquired infections seem largely preventable. This realization should also provide stimulus to further investigation of the complex epidemiology of such infections and thus to more effective control.

Summary

The cases of 189 patients with micrococcic (staphylococcic) infections, occurring during a period of three and one-half months, were investigated. In 100 cases the infections appeared during hospitalization, and in 32 they appeared within 60 days of discharge from the hospital. The remainder were acquired before hospital admission. The infections investigated included 37 infections of surgical wounds and 14 of micrococcic pneumonias. Twelve of the patients had micrococcic bacteremia; six of them died.

In the entire group of 189 patients, 24 deaths occurred, with micrococcic infections a contributing factor in each case. Twenty-one of the deaths were in the group of patients whose infections appeared during hospitalization. In 28 of the 132 infections (21%) which were probably acquired as a result of hospitalization, the causative organisms were sensitive only to bacitracin. Studies with bacteriophage typing indicated that a variety of strains of micrococci were isolated from infections except in puerperal and neonatal infections, in which a single bacteriophage type, 52/42B/44A, appeared to be responsible for most infections.

Most of the micrococcic infections which appeared during hospitalization or shortly after discharge were the result of cross-infection within the hospital. Such infections are theoretically preventable, and the following of preventive measures is urged.

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ISONIAZID AS A CAUSE OF OPTIC NEURITIS AND ATROPHY

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• *The most frequent toxic symptoms and signs following isoniazid therapy are secondary to involvement of the nervous system. In addition to these usual toxic manifestations, two cases of bilateral optic atrophy occurred after the use of isoniazid. In one of these cases discontinuance of use of the drug brought reversal of the process. Two other similar cases have been reported. Isoniazid optic neuritis and/or atrophy does not seem an example of drug idiosyncrasy, but rather part of the commonly found toxic neuritis associated with use of this drug. All patients receiving isoniazid should be given pyridoxine. An ophthalmological examination should be conducted whenever visual complaints are voiced.*

The incidence and types of toxic effects following isoniazid therapy have been difficult to define accurately because of the nature of the complaints as well as the varied approaches by different observers. The most frequent toxic symptoms and signs are secondary to involvement of the nervous system. These include dryness of the mouth, transient diplopia, heartburn, flatulence, delayed micturition, vertigo, dizziness, paresthesias, numbness, muscle twitching, hyperreflexia, headaches, burning feet, and mood disturbances.[1] It appears that malnourished individuals, chronic alcoholics, and persons with preexisting cerebral damage (as in epilepsy), are particularly prone to the neurotoxic effects of isoniazid.[2]

Optic disturbances secondary to isoniazid therapy have not been frequently recorded. Janssen and Böke[3] observed an increase in optic lesions in patients with tuberculous meningitis who were treated by the intrathecal administration of isoniazid with streptomycin as compared with those treated by the intrathecal administration of streptomycin alone. Sutton and Beattie,[4] in 1955, reported one case of bilateral optic atrophy following the use of isoniazid, and, later that year, Keeping and Searle[5] reported an instance of bilateral optic neuritis following the use of isoniazid. We have observed two cases of bilateral optic atrophy; in one, discontinuation of isoniazid therapy brought reversal of the process. Since it is not generally known that such lesions result from use of isoniazid, it is felt that presentation of these cases, along with a review of some aspects of isoniazid toxicity, is warranted.

Report of Cases

Case 1.—A 50-year-old woman was admitted to the hospital in March, 1955, for further treatment of pulmonary tuberculosis. Her illness dated to 1935, when she first became ill with tuberculosis involving the left lung. At that time crushing of the left phrenic nerve was done, and after two years of bed rest the patient was discharged. The tuberculosis reactivated in 1948, and the patient was treated with streptomycin for two months and with therapeutic pneumothorax of the right lung for four years. In September, 1952, she received 300 mg., or 5 mg. per kilogram of body weight, of isoniazid daily for one month. In July, 1953, isoniazid therapy was restarted, using the same dosage, and was continued until the patient was admitted to this hospital. The patient had a strong family history of tuberculosis. She did not drink alcoholic beverages and had smoked 10 to 15 cigarettes daily for many years.

Physical examination revealed a well-developed woman who appeared chronically ill. The blood pressure was 96/60 mm. Hg, pulse 82 per minute, and temperature 99 F (37.2 C). The right hemithorax was smaller than the left. There were diminished breath sounds over the right side of the chest, and coarse rales were heard over the apex of the right lung. The heart, though shifted to the right, was normal. There was slight tenderness of the left calf muscle. The remainder of the physical examination was normal. The hemoglobin level, hematocrit reading, leukocyte and differential counts, urinalysis, and blood serology were normal or negative. The sedimentation rate was 22 mm. per hour. A chest roentgenogram showed a small vertical heart displaced to the right. There was marked pleural thickening in the right hemithorax and moderate fibrous calcification of the apex of the left lung. Emphysematous changes were present throughout both lung fields.

When the patient was admitted to the National Jewish Hospital at Denver, in March, 1955, the isoniazid dosage was increased to 900 mg., or 16 mg. per kilogram, daily, and she also received 100 mg. of pyridoxine and 100 mg. of thiamine daily. Six weeks later, she complained of dizziness as well as numbness and tingling in her lower extremities. The isoniazid dosage was reduced to 450 mg., or 8 mg. per kilogram, daily. One week later, the patient experienced tingling and numbness in her hands and complained of diminution of vision. Isoniazid therapy was discontinued at this time.

Examination by an ophthalmologist revealed a visual acuity of 14/200 in both eyes. The ocular tension was 16.9 mm. Hg in both eyes. The right optic disk was redder than normal on the nasal side and showed some pallor on the temporal side. There was a circular ring of pigment about the disk. The remainder of the fundus appeared normal. The left disk was similar, though the changes were not as marked, and the zone of pigmentation was not observed. There was a normal response with the 3-mm. white target. A concentric constriction of the visual fields, more marked on the right, was present with the 1-mm. white target. The findings were consistent with the diagnosis of optic neuritis associated with early atrophy. Three weeks later, there was an increase in the concentric constriction of both visual fields, again more marked on the right. No special treatment was given. There was a steady and gradual improvement in vision as well as lessening of the paresthesias. On reexamination of the patient six months later, the ophthalmological findings were completely normal.

This 50-year-old woman developed bilateral optic neuritis and early optic atrophy associated with peripheral neuritis within two months after her daily dosage of isoniazid was increased from 5 to 16 mg. per kilogram. After discontinuation of isoniazid therapy, her symptoms improved gradually, and within six months she had recovered fully. A microbiological assay for serum isoniazid, performed six hours after a test dose of 4 mg. of isoniazid per kilogram

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showed 1.6 mcg. per cubic centimeter. This is considered to be a high level of biologically active isoniazid,[6] indicating that the patient did not inactivate this drug rapidly.

CASE 2.—A 64-year-old man was admitted to the Veterans Administration Center, Wadsworth, Kans., on Oct. 18, 1954. He had a history of generalized weakness and weight loss of 30 lb. (14 kg.), extending over several months. He was disoriented, and an accurate history could not be obtained, though it was known that he was a chronic alcoholic. His previous illnesses had included bronchitis, meningitis, smallpox, pertussis, and influenza. Physical examination revealed a malnourished, chronically and acutely ill patient. The complete physical examination revealed no other significant abnormalities except loss of vibratory sensation in the lower extremities. The initial chest roentgenogram revealed a cavity with surrounding infiltration in the upper part of the left lung. The leukocyte count was 13,800 per cubic millimeter, with a differential count of 86% neutrophils, 13% lymphocytes, and 1% monocytes. The sedimentation rate was 26 mm. per hour. The hemoglobin level, hematocrit reading, blood glucose level, carbon-dioxide content, and nonprotein nitrogen, serum potassium, and calcium levels were normal; a serologic test for syphilis was negative. The serum sodium level was 130, and the serum chloride level was 92 mEq. per liter. The serum inorganic phosphorus level was 1.8 mg., the total serum protein level 4.9 Gm., and the serum albumin level 3.1 Gm. per 100 cc. The total serum cholesterol level was 90 mg., with cholesterol esters 33 mg. per 100 cc. The spinal fluid pressure and dynamics were normal. The cell count and glucose, chloride, and protein content of the spinal fluid were normal. The colloidal gold reaction and serology were negative. A skin test with intermediate-strength purified protein derivative was positive; skin tests for histoplasmosis, coccidioidomycosis, and blastomycosis were negative. Repeated examinations of the sputum were negative for acid-fast bacilli.

A tentative diagnosis of tuberculosis was made, and treatment with isoniazid in a daily dosage of 400 mg., or 9 mg. per kilogram, was started. Thirty days after the start of isoniazid therapy, the patient complained of severe retro-orbital pain on the left. On the following day, he was aware of visual loss in the left eye that progressed rapidly to complete blindness. Within four days, similar involvement of the right eye occurred. The use of isoniazid was discontinued, and the patient was treated with vasodilators. His condition deteriorated rapidly; two months after admission to the hospital he developed bronchopneumonia, and he died on Dec. 17, 1954.

Examination by an ophthalmologist, after the onset of visual difficulties, had revealed complete loss of vision as well as an absence of direct and consensual light reflex in the left eye. There was diffuse retinal blurring, but no hemorrhages or exudate were present. One day later, a 1-to-2-D. papilledema was observed in the left eye. There were no extraocular muscle disturbances. Four days after onset of visual difficulties, the right pupil became fixed and the borders of the disk were poorly defined. The diagnosis of an acute fulminating optic neuritis was made. Skull roentgenograms, bilateral carotid arteriograms, and a pneumoencephalogram were normal. An electroencephalogram showed definite abnormalities which were not characteristic of any specific lesion but which were consistent with generalized organic disturbance. Prior to the patient's death, ophthalmological changes consistent with a bilateral optic atrophy were observed.

Postmortem Examination.—At autopsy it was found that the apex of the left lung was firmly bound to the chest wall and the right pleural cavity was obliterated by fibrous adhesions. The apex of the left lung contained a single thin-walled cyst measuring 9.5 cm. in its greatest diameter. The brain weighed 1,725 Gm. The convolutions and sulci were not flattened. The cerebral hemispheres were symmetrical. The brain was firm in consistency, and coronal sections failed to demonstrate any dilatation of the ventricular systems. The lining of the anterior horn of the left ventricle was somewhat flattened, and numerous petechial hemorrhages were observed. Sections of the cerebral hemispheres showed prominent vascular markings. The brain stem was not remarkable.

Microscopic examination of sections from the cavity in the upper lobe of the left lung showed that it was lined, in part, by respiratory epithelium. In other zones, the lining was ragged and neutrophils and fibrin were present. The wall of the cavity consisted of cellular fibrous tissue moderately infiltrated by lymphocytes and plasma cells. A few multinucleated giant cells were found. Sections of the anterior horn of the left lateral ventricle of the brain showed that it was lined by an ependyma containing granulations. The ependymal lining was interrupted and had an irregular surface that showed numerous petechial hemorrhages. The adjacent parenchyma showed increased vacuolation. Sections through the optic nerve were not remarkable. There was some piling of the arachnoid cells, and a moderate focal fibrous thickening of the meninges was present. The anterior lobe of the pituitary gland was not remarkable, but sections of the posterior lobe were pigmented.

The final diagnoses were blindness, toxic in origin; bronchopneumonia; and cyst of the left lung, congenital in origin.

This 65-year-old male chronic alcoholic was admitted to the hospital in a state of advanced malnutrition. Because of the possibility of tuberculosis, he was treated with isoniazid. After 30 days of therapy, he developed optic neuritis in the left eye and then in the right eye. This progressed rapidly to optic atrophy and complete blindness. The patient's condition deteriorated rapidly, and he died within two months after hospitalization. Although the etiology of the optic changes was not specifically known, it was felt that the disturbances were precipitated by the isoniazid therapy.

Comment

Sutton and Beattie,[4] in 1955, were the first to report the occurrence of optic atrophy after the administration of isoniazid. Their patient complained of loss of vision 10 days after receiving 200 mg. of isoniazid and 15 Gm. of aminosalicylic acid daily. Little attention was paid to these symptoms because visual disturbances resulting from isoniazid therapy had not been reported previously, and the medication was continued for six weeks. The visual difficulties persisted and progressed to bilateral optic atrophy. The authors speculated that the optic atrophy was related to a drug idiosyncrasy secondary to isoniazid. Aminosalicylic acid was not implicated because the patient had received this drug previously without ill-effects. Keeping and Searle,[5] in the same year, reported the onset of optic neuritis, secondary to isoniazid. Their patient complained of visual loss 25 days after first receiving 1 Gm. of streptomycin and 200 mg. of isoniazid daily. Six weeks later, a diagnosis of bilateral optic neuritis was made and the medication was discontinued. After this, there was a rapid return of the patient's vision to normal. These authors again stressed the rarity of an optic neuritis following isoniazid therapy and suggested that a drug idiosyncrasy was the precipitating cause.

Our report of two cases of optic disturbance during the administration of isoniazid brings the total of such cases to four. The onset of visual difficulties occurred within one month after initiating therapy in three cases, and within two months after a marked increase in the dosage in the fourth case. There were no other known causes for the optic involvement in three of the four patients. In one of our cases, the patient was a markedly malnourished alcoholic, and it may be fair to question the role of isoniazid in his optic changes.

With so few cases reported, it is possible that the visual lesions occurred by chance in these patients receiving isoniazid. This seems unlikely when one considers not only the known neurotoxicity of isoniazid but the fact that the patient of Keeping and Searle, as well as one of ours, improved remarkably after isoniazid therapy was discontinued. In addition, and of importance, there was the association of peripheral neuritis and optic neuritis in one of our patients. These lesions occurred at the same time, and both gradually improved when isoniazid therapy was stopped.

Mechanism of Neurotoxicity.—It is our impression that isoniazid optic neuritis and/or atrophy due to isoniazid is not an example of drug idiosyncrasy, as suggested by others, but that it is part of the toxic neuritis commonly found with use of this drug. The reason for the rarity of this condition when compared to the incidence of peripheral neuritis in patients receiving isoniazid is unexplained. Since studies have been conducted on the causes and prevention of peripheral neuropathy following isoniazid therapy, a discussion of these findings may be useful in defining the relationship between isoniazid therapy and optic disturbances. Because similar symptoms occur with states of nicotinic acid deficiency as with isoniazid intoxication, it was suspected that the peripheral neuritis related to isoniazid therapy resulted from a competitive inhibition of nicotinic acid. Vilter and co-workers [7] felt that this was unlikely, since they found normal urinary values for nicotinic acid and its derivatives in patients showing severe toxic effects from isoniazid. Biehl and Vilter [8] found that isoniazid therapy caused a marked urinary loss of pyridoxine, which reverted to normal when isoniazid therapy was stopped. Pyridoxine-deficiency states in man, produced by pyridoxine-deficient diets or by use of metabolic antagonists, may produce peripheral neuritis.[9] Symptoms of these types of induced pyridoxine deficiency include glossitis and dermatitis which are not unlike those conditions produced by isoniazid in some patients. Degenerative changes of the peripheral nerves, thoracic root ganglion cells, and posterior columns of the spinal cord have been described in pigs deficient in pyridoxine.[10]

Biehl and Nimitz [11] reported that pyridoxine, in dosages of 50 to 450 mg. daily, prevented the appearance of peripheral neuritis secondary to high dosages of isoniazid. Carlson and co-workers [12] reported that the administration of pyridoxine with isoniazid decreased the incidence of peripheral neuritis and permitted the administration of high dosages of isoniazid for longer periods of time. The experimental and clinical evidence suggests that isoniazid alters the metabolism of pyridoxine and thus could produce both the peripheral and optic changes.

The degree to which isoniazid is altered by metabolic processes may have some relationship to the neurotoxicity of the drug. That portion of the drug which escapes inactivation, the biologically active moiety, appears to be responsible for the toxic effects of isoniazid. Our experience in other studies [13] suggests that the severe toxic reactions have occurred in those patients who, as a result of the retarded isoniazid inactivation, maintain a higher serum level of the biologically active moiety. Although the amount of biologically active isoniazid present on the same drug dosage varies markedly from person to person, it remains relatively constant for a given individual.[14] We have observed that the level of biologically active isoniazid is increased in most patients by the simultaneous administration of aminosalicylic acid, which probably acts by competing with isoniazid for acetylation.[15] The amount of biologically active isoniazid present is also increased by increasing the dosage of isoniazid. Biehl and Nimitz [11] observed that 44% of the patients who received 16 to 24 mg. of isoniazid daily per kilogram developed peripheral neuritis. This occurred in 20% of the patients receiving 11 to 15 mg. per kilogram daily and in only 8% of those receiving 6 to 10 mg. per kilogram daily.

As indicated by the above, the patients who are most likely to develop neurotoxic effects from isoniazid are those who (1) inactivate isoniazid slowly or receive high dosages, (2) receive both aminosalicylic acid and isoniazid, and (3) have not been given pyridoxine.

Two of the four patients who developed optic neuritis or atrophy were receiving high dosages of isoniazid, and one of them was known to inactivate isoniazid slowly. A third patient was receiving aminosalicylic acid in addition to isoniazid. Only one of the four received pyridoxine.

Since serious visual disturbances may follow the use of isoniazid, it is imperative that ophthalmological examinations be conducted whenever visual complaints are voiced. This is important in view of the fact that the optic lesions are likely to be reversible if isoniazid therapy is discontinued promptly. All patients receiving isoniazid should be given pyridoxine in a dosage of 25 to 100 mg. daily to reduce the incidence of neurotoxic effects from isoniazid.

Summary

In two cases, optic neuritis and, eventually, atrophy occurred after the use of isoniazid. Serious optic disturbances attributable to isoniazid have been reported in a total of four cases, including these two. It is assumed that the optic lesions are part of the neurotoxic effects of isoniazid and, though rare, do not represent an unusual form of drug idiosyncrasy. The cause and treatment of peripheral neuritis due to isoniazid have a bearing on the problem of optic neuritis due to isoniazid. The physician should be aware that serious visual lesions may follow the use of isoniazid. If all patients receiving isoniazid are given pyridoxine daily, the incidence of neurotoxic effects will be reduced.

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PERFORMANCE OF CESAREAN SECTION WITH AID OF GENERAL ANESTHESIA

ANALYSIS OF ONE THOUSAND ELEVEN OPERATIONS SINCE 1948

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• *Experience with the cyclopropane-curare type of general anesthesia in 1,011 cesarean sections has been analyzed and compared with published reports on the use of other types of anesthesia for this operation. All patients in this series received scopolamine with or without additional premedication, and after the induction of anesthesia with cyclopropane an injection of 6 to 12 mg. of tubocurarine chloride was given intravenously. The one maternal death in this series occurred two weeks after the operation and was not related to the anesthesia. The associated gross infant mortality rate was 5.4%, of which 2.9% were stillbirths and 2.5% were neonatal deaths, but when this figure was corrected for prematurity, congenital anomalies, and other factors clearly unrelated to the anesthesia, the net rate was 4.7%, with 2.4% for stillbirths and 2.3% for neonatal deaths. These findings conflict with claims that have been made for the superiority of other methods of anesthesia. The good results here reported are ascribed in part to the care and observation given to the individual patient before the operation as well as to the attention given in the recovery room. It is therefore recommended that trained anesthesiologists be kept available for obstetric patients throughout the 24-hour day.*

There is no one method of anesthesia for cesarean section that is superior to all other methods. Recent literature [1] has indicated that better results are to be obtained with regional anesthesia than with general anesthesia in cesarean sections. In order to evaluate the validity of such statements, it was decided to review the cesarean sections done by us since 1948, 99% of which were performed with the patient under general anesthesia with cyclopropane and curare.

This study is a report of 1,011 cases of cesarean section performed with the patient under general anesthesia. The period covered is from Jan. 1, 1948, through April 30, 1956, and includes a large number of sections performed within the modern era of surgery and anesthesia.

The cesarean sections in this study were performed within the North Side Unit of the Youngstown Hospital, Youngstown, Ohio, which comprises one of the two maternity services located in the city. The hospital is essentially a private hospital, with service cases representing less than 5% of the total number of deliveries. Delivery privileges are extended to general practitioners, who conduct approximately half of the annual deliveries. However, the cesarean sections are performed exclusively by physicians who are diplomates of the American Board of Obstetrics and Gynecology or who are qualified for certification by that board.

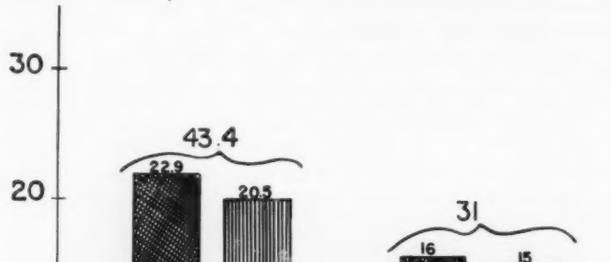
Anesthesia for all cesarean sections is conducted by or under the direct supervision of a physician who has had full residency training in anesthesiology and is a member of or in the process of fulfilling requirements for certification by the American Board of Anesthesiologists.

From the Department of Anesthesia, Youngstown Hospital Association.

Method

The anesthetic technique used is the cyclopropane-curare method introduced for cesarean sections in 1947 by Whitacre and Fisher.[2] All patients are seen

preoperatively by an anesthesiologist for a general preoperative evaluation and also for indoctrination of the patient as to the method used. The sequence of events to be followed in the operating room is outlined to the patient, since, with the technique used, anesthesia is not induced until immediately before the incision is to be made. At this time orders are



Graph showing perinatal mortality per 1,000 live births in Youngstown Hospital as compared with average in United States in 1950. Data on United States average from Potter.[3]

written for the typing and cross-matching of blood for the patient. All patients have blood ready for them preoperatively. Blood is administered preoperatively as indicated. Food and orally given fluids are withheld before elective section, as with any major surgery, and also at the onset of labor in all obstetric patients.

Preoperative Medication.—From 1948 to 1954 the patients received only a belladonna derivative for preoperative medication. Since 1954 we have been giving our patients two hours preoperatively a barbiturate (100 mg.), levorphanol (Levo-Dromoran) tartrate (1 mg.), and scopolamine (0.4 mg.).

Anesthesia in the Operating Room.—After the patient is draped and the surgical staff is completely gowned, anesthesia is induced with cyclopropane. After induction is complete, 6-12 mg. of tubocurarine chloride is administered intravenously. The incision is made approximately one minute after the curare compound is administered. There is frequently a minimal flexor response in the patient as the incision is made, but we have not had any patients recall a painful experience postoperatively. The flexor response is desirable and indicates a proper level of anesthesia. Respirations are assisted as indicated. After the delivery of the baby, which is usually six to nine minutes after the onset of anesthesia, the level of anesthesia is deepened and maintained, as for any other surgical procedure.

Postoperative Care.—All infants receive nasal and pharyngeal suctioning with a soft rubber catheter immediately after delivery. Infants with any degree of respiratory embarrassment are immediately seen and treated by an anesthesiologist. All patients are taken to the recovery room postoperatively and are observed there until their conditions are completely stabilized and they are awake.

Results

During the period covered in this study, there were 32,238 deliveries, of which 1,011 were cesarean sections conducted with the patient under cyclopropane-curare anesthesia.

The figure presents data on the over-all fetal mortality on our obstetric service as compared with reports in the recent literature.[3] There were 507 stillbirths and 462 neonatal deaths in this series, giving a gross, uncorrected fetal loss of 3%. For this period, there were 16 stillbirths and 15 neonatal deaths per 1,000 live births.

There were 10 maternal deaths on our obstetric service during this period, giving a maternal mortality rate of 1 per 3,100 live births. In 1950 in the United States the average maternal mortality rate was 1.5 per 1,000 live births. Thus, the maternal mortality rates per 10,000 live births in all of the United States and on our obstetric service were 15 and 3.3 respectively. In the series of cesarean sections, there were no maternal deaths associated with anesthesia. There was one maternal death in this series, which occurred two weeks after cesarean section and was secondary to intestinal perforation and peritonitis.

Associated with cesarean section, there was a gross infant mortality rate of 5.4%, of which 2.9% were stillbirths and 2.5% were neonatal deaths. The criteria for correction for fetal and neonatal mortality are (1) congenital anomalies judged to be imcompatible with survival, (2) fetus of less than 1,000 Gm. (2.2 lb), (3) estimated gestation of less than 28 weeks, (4) evidence suggestive of intrauterine death before section, and (5) evidence at section of intrauterine death before section, such as macerated fetus. If these criteria are used rigidly, the corrected infant mortality rate is 4.7%, of which 2.4% were stillbirths and 2.3% were neonatal deaths.

Indications for Cesarean Section and Total Associated Perinatal Deaths, with Percentages of Stillbirths Versus Neonatal Deaths

	No. of Cases	Stillbirths, %	Neonatal Deaths, %
Abruptio placentae	15	87	13
Placenta praevia	11	28	72
Previous section	6	50	50
Cephalopelvic disproportion	3	...	100
Toxemia	5	20	80
Miscellaneous maternal distress	5	60	40
Miscellaneous fetal distress	1	100	...
Erythroblastosis fetalis	1	...	100
Uterine inertia and dystocia	4	75	25
Prolonged labor	1	...	100
Abnormal presentation	1	100	...
Prolapsed cord	2	100	...

The table lists the perinatal deaths associated with various indications for cesarean section and compares the incidence of stillbirth versus neonatal death, in order to determine the relationship of indication for

cesarean section with the chance of a stillbirth or neonatal death. It can be noted quite readily that abruptio placentae, as expected, is associated with a markedly high incidence of stillbirths.

Comment

A review of the literature will demonstrate that various methods of anesthesia have been used in cesarean sections, such as regional,[4] general,[5] and intravenous.[6] The results obtained by the different methods are quite variable, but it can be noted that good results are possible by the use of all methods by trained anesthesiologists. This study was undertaken to review the results of a large series of cesarean sections done by one method of anesthesia (cyclopropane and curare).

As indicated by the results noted above, the use of cyclopropane and curare has been a highly successful method of anesthesia for cesarean section in our hands. There were no maternal deaths attributed to anesthesia in this large series, and, from all causes, there was only one maternal death, giving results comparable to those reported by Lull and Ullery,[4d] who used spinal anesthesia. The claim by the proponents of conduction anesthesia that general anesthesia will produce an increase of perinatal and maternal mortality is not borne out by this study. The maternal mortality rates for cesarean section in the recent literature range from 0.08% to 5.82%.[7] The perinatal mortality rates associated with this operation range from 2.96% to 22%.[8]

The problem of aspiration of vomitus is an ever-present one for the anesthesiologist regardless of the method of anesthesia. We feel it is not a problem to be feared but one to be respected. Aspiration of vomitus has not been a problem in our series. The light level of anesthesia, close observation of the patient, and prompt and adequate therapy, we feel, have prevented the occasional patient who vomits from getting aspiration pneumonia.

It is well to note that the ultimate statistics that are derived in the study of any anesthetic method are markedly affected by the type of patient that is presented to the anesthesiologist for anesthesia. Close observation, good therapy, and adequate consultation service on the part of the obstetric department present more patients in optimal condition for anesthesia and, thereby, produce much better results. If there is a weak link in the obstetric care of the patient, then the condition of the candidate for anesthesia will be much worse and the results will be poor even though the anesthesia be of equal quality.

A word about the literature on cesarean section studies is warranted because of the abundance of small series with large conclusions in the literature. The practice of deriving results from a small series is dangerous, as the standards of comparison are in the realms of a few per cent to fractions of a per cent. It is obvious that one or two bad results can change the statistics discussed markedly, and, in order to arrive at valid conclusions, a large series of cases treated by a single method must be reported. There is no doubt that, in order to obtain good results by any method of anesthesia, 24-hour hospital coverage by trained anesthesiologists is required. The practice of inducing good anesthesia in the patient who is undergoing cesarean section between 8 a. m. and 5 p. m. and then allowing the emergency patient to be handled by emergency personnel can only tend to produce poor results. Regardless of the method of anesthesia used, there must be close liaison between the obstetrician and the anesthesiologist. Since anesthesia for cesarean section is concerned with two lives, there are times when the operator must change his technique to fit the anesthetic method of choice or the anesthesiologist must change his method to fit the operative technique of choice. Any one method cannot fit all cases or operations, but by mutual consultation and education between the obstetrician and anesthesiologist a combination can be obtained that is best for the individual patient.

Summary

A review of anesthesia with cyclopropane and curare, administered by or under the direct supervision of trained anesthesiologists, in 1,011 cesarean sections performed in the Youngstown Hospital since 1948 indicates that in trained hands one method of anesthesia is not superior to all other methods of anesthesia. No maternal mortality associated with anesthesia occurred in this series. There was one maternal death secondary to intestinal perforation and peritonitis. The corrected perinatal mortality rate was 4.7%. Abruptio placentae is associated with the greatest incidence of stillbirths.

Good results for anesthesia are directly proportional to the care and observation the patient receives prior to the operation, and significant reduction in mortality and morbidity demands precise attention during operation and a well-run recovery room.

Twenty-four-hour coverage by trained anesthesiologists is mandatory for good results.

North Side Unit, Youngstown Hospital Association (4) (Dr. Allen).

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INTRAMEDULLARY FIXATION OF METACARPAL FRACTURES

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• *The treatment of fractures by inserting longitudinal intramedullary wires for fixation has been applied in 30 patients with metacarpal fractures. Local anesthesia was obtained for fractures of the fifth metacarpal (80% of this series) by blocking the ulnar nerve, which is easily accessible at the elbow. Reduction is accomplished with direct pressure over the fracture toward the palm of the hand and counter pressure dorsally on the flexed proximal phalynx. The wire or pin is gently drilled longitudinally through the soft surface of the head and should run the full length of the bone so as to engage the proximal end and produce adequate fixation. In most cases bony union has been solid enough in three weeks to remove the wire. The patients have been able to return to work at once, and no infections or refractures have occurred.*

In the ever-advancing field of orthopedic surgery, intramedullary fixation is gaining in popularity. This principle has been used in almost every part of the body to maintain fracture fixation and yet allow a more normal physiology of the part to exist. The freeing of joints from plaster fixation and the reduction of economic loss to the patient have been most appealing. These same advantages may also be applied to fractures of the metacarpals in a simple but effective manner.

Metacarpal fractures rank second among the most common fractures of the hand and fingers. In a large military installation, such as the Keesler Air Force Base, Mississippi, from whence most of this series was compiled, metacarpal fractures resulting from fisticuffs and from direct trauma to the hand are frequently encountered.

Locations of Metacarpal Fractures

Location	No.	Percentage	
Fifth metacarpal			
Neck	19	63	80
Shaft	5	17	
Fourth metacarpal			
Shaft	3	10	
Second metacarpal			
Shaft	3	10	

It has been shown by Sutro,[1] Norman,[2] and Berkman[3] that the above advantages of intramedullary nailing apply to the metacarpals. They advocate transverse metacarpal wiring to fix the fragments. Aside from the technical difficulty of transverse wiring, this method has been found to affect the efficiency of the intrinsic muscle mechanism.

Closed reduction and plaster fixation has been recommended by Bunnell.[4] This procedure, except in the most skilled of hands, frequently results in finger-and-hand stiffness, malunion, necrotic skin areas, and great economic loss.

A more physiological method, that is, longitudinal intramedullary wire fixation, seems to serve this purpose best. It offers good stability, simplicity of insertion and removal of pins, and no physiological impairment of muscle mechanism of the hand. The series treated was composed of 30 patients with fractures of the metacarpals, 80% being of the fifth metacarpal, 10% of the second metacarpal, and 10% of the fourth metacarpal.

Anesthetization

Ulnar nerve block at the elbow was used on 24 fractures of the fifth metacarpal. This has proved to be a valuable adjunct to the success of this simple procedure. It facilitates success for several reasons.

1. There is no need for the administration of a local anesthetic at the fracture site, which, if used, would obliterate the bony landmarks necessary for pin insertion.

2. This method of blocking allows the procedure to be done anywhere that sterile conditions can be obtained.

3. It is easy to find the ulnar nerve for nerve block, since it lies subcutaneously between two bony landmarks. In most instances the nerve can be palpated with the index finger (fig. 1).

When 10 cc. of a 1% solution of lidocaine (Xylocaine) hydrochloride is used, a definite numbness can be obtained. This will allow ample time for pin insertion and for the taking of x-rays if they are needed. It is important that approximately 20 to 30 minutes elapse between the injection of lidocaine and the reduction of the fracture of the fifth metacarpal. This time may be spent in preparing the hand for surgery.

The median and radial nerves may be blocked just above the wrist in the case of fractures involving the other four metacarpals.

Pin Insertion

After successful anesthetization, the fracture is reduced, with the metacarpophalangeal joint flexed to 90 degrees and pressure applied in a dorsal direction upon the flexed finger. Counterpressure is applied on the dorsum of the hand, the fracture site being pushed toward the palm. These forces reduce the fracture (fig. 2).

Fig. 1.—Ulnar nerve at elbow lies in a bony groove and is easily found for nerve block.

The fracture is held in this position by an assistant. A 0.062-gauge plain Kirschner wire is used. The wire is introduced through the skin where it meets the distal articular surface of the head of the metacarpal (fig. 3). The extensor tendon slides toward the radial side of the metacarpal head, when the metacarpophalangeal joint is flexed to 90 degrees, and so stays out of the way of the pin during this procedure. The pin is gently drilled through the soft cartilaginous-bony surface of the head (fig. 4). It should run the full length of the metacarpal and engage its base to produce adequate fixation. Entry into the carpometacarpal joint seems to cause no ill effects.

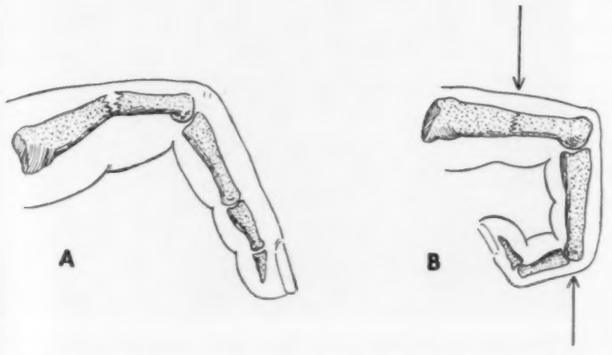

Fig. 2.—*A*, fracture of shaft of the metacarpal presents dorsal angulation of bone at fracture site; "knuckle" is accordingly depressed. *B*, two simple forces are needed to reduce fractures of either neck or shaft of the metacarpal. They are (1) pressure toward palm over fracture site and (2) counterpressure in dorsal direction on flexed proximal interphalangeal joint.

X-rays are then taken. In the case of a neck fracture of the fifth metacarpal, there is so little danger of the pin leaving the intramedullary canal that it is not necessary to take x-rays in the operating room. Shaft fractures are more difficult, and x-rays on the operating table should be made.

After satisfactory insertion, the pin is cut at a level just beneath the skin. This usually leaves about ¼ in. of pin extending subcutaneously from the articular

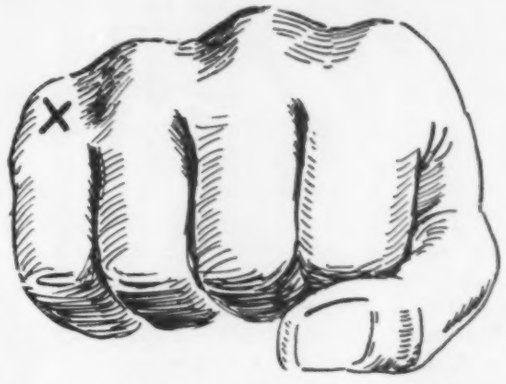

Fig. 3.—Most of head of metacarpal becomes subcutaneous with reduction of fracture. Center of head is easily found and is point where pin should be introduced.

surface, which insures easy removal. No plaster is needed, and the patient is allowed to return to duty immediately (figs. 5 and 6).

Comment

Open fractures, which can be made clean in a few hours, can be pinned. The bone, however, must be covered by skin. Open fractures of the metacarpals are rare, and none has been encountered in this series. Oblique, unstable fractures do not lend themselves well to this procedure and probably need traction for support.

Observations

Several interesting side-lights on this procedure of intramedullary fixation have been found. They are as follows:

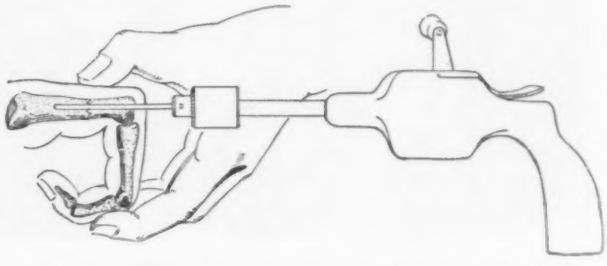

Fig. 4.—With forces necessary for reduction still being applied by an assistant, Kirschner wire is drilled into place.

1. By burying the pin beneath the skin, no infection or weeping of any nature has been encountered. Removal has been simple, because the pin was easily palpable subcutaneously. It was removed with the patient under local anesthesia, in three to four weeks.

2. Metacarpophalangeal joint motion has been limited while the pin was in place. This was due to a mechanical block of the joint by the pin. However, in all cases, motion returned to normal shortly after the pin was removed.

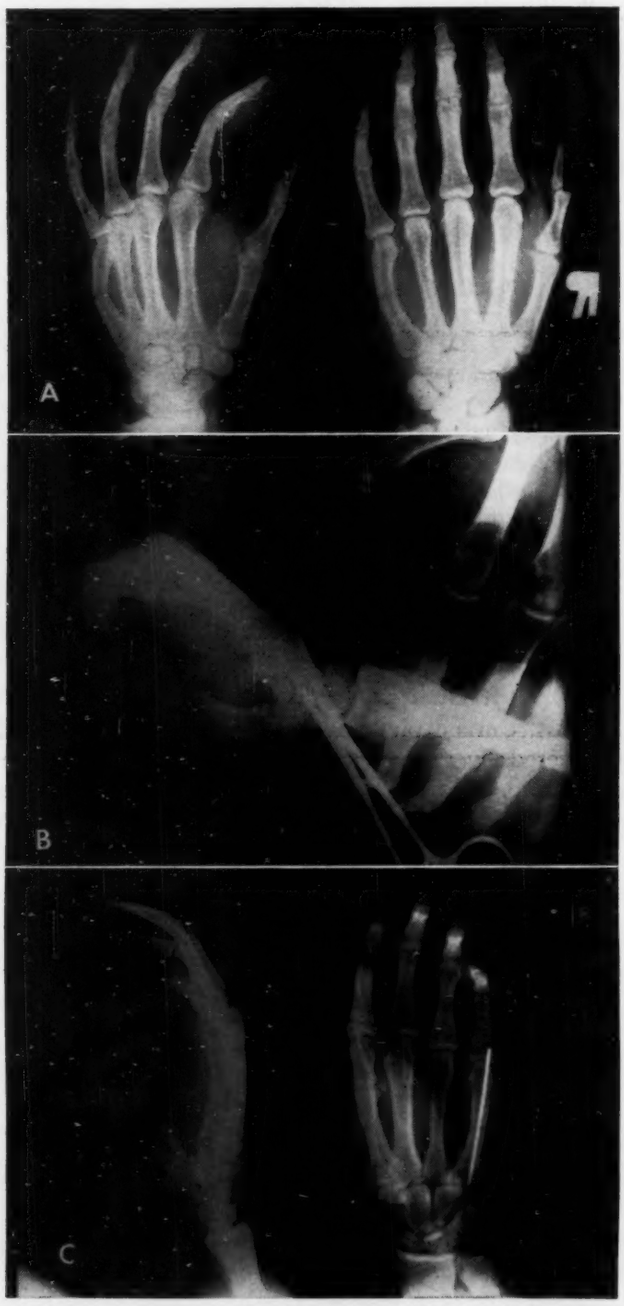

Fig. 5.—*A*, fracture of midshaft of fifth metacarpal. *B*, x-ray taken in operating room. Note pressure being applied to dorsal aspect of fracture to reduce it; counterpressure on flexed proximal interphalangeal joint is not shown; pin is introduced while this position is held. *C*, reduced fracture with pin in place.

3. In earlier cases of shaft fracture, no x-rays were made in the operating room. In three procedures the pin missed the proximal fragment. Nevertheless, stability was so good that no cast was applied. Results were good and union occurred, with satisfactory alignment, in three to four weeks.

4. Threaded wires were tried but were carded because of the difficulty of removal. It also felt that they did not increase the stability the fracture site. The unthreaded pins did not t to migrate.

Fig. 6.—*A*, fracture of neck of fifth metacarpal (common metacarpal fracture). *B*, reduction is anatomical and pin gages carpometacarpal joint. *C*, three weeks after fracture; has been removed; fixation is excellent, and excessive callus been avoided.

5. Bony union has been solid enough in fresh fra tures in three weeks to remove the pins. With fractu that occurred a week or more prior to pinning, the pi were left in place four weeks. Solid unions have o curred in both groups and no refractures have be experienced.

Summary

Thirty patients with metacarpal fractures have been treated by means of longitudinal intramedullary Kirschner wires with no external fixation. Fixation has been good, union has been prompt, and no infection has been encountered. As most of the fractures have been of the fifth metacarpal, it is felt that ulnar nerve block at the elbow has greatly simplified the procedure. The fact that the patient is allowed to return to duty at once has pleased both the employer and the patient.

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EVALUATION OF DIATRIZOATE (HYPAQUE) IN PERIPHERAL ANGIOGRAPHY AND AORTOGRAPHY

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and
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• There were no serious systemic effects after approximately 100 injections of diatrizoate salts for vascular opacification, administered to 83 patients. Local reactions were infrequent and consisted of varying degrees of pain and vasospasm of very brief duration, although the vasospasm never led to ischemic symptoms, and there were no thromboses, even in the distal veins of the extremities. No experimental studies have been performed to determine the possible effect on the spinal cord from large doses of diatrizoate, and it should not be assumed that massive doses of this product will not produce permanent paralysis when injected into the human aorta.

The roentgenographic delineation of arteries by injection of an opaque medium has been an established diagnostic procedure for many years. Recent developments in surgery of the blood vessels have greatly increased the importance and the use of angiography, with the result that many studies have been made to develop safer materials and improved techniques for their administration. Generally, the substances which have been injected into the blood stream to opacify the vessels have been of two types. About a decade ago a colloidal suspension of thorium dioxide (Thorotrast) was widely used in arteriography. Because of the radioactivity of thorium and its indefinite retention in the body, it has been generally rejected for vascular opacification.

More commonly today, the solutions of organic salts containing iodine are used. Iodopyracet (Diodrast) and acetrizoate (Urokon) are the two preparations employed most frequently. Iodopyracet has had extensive use in urography, and has been analyzed by Pendergrass and others [1] in mass surveys in 1942 and again in 1954. There were 57 deaths related to use of this material in almost 4,500,000 urographic examinations. The majority of these deaths were apparently due to hypersensitivity to the drug, a condition which was not manifested by the usual sensitivity studies done prior to urographic examination. Untoward reactions of a minor character, such as venous spasm, urticaria, angioneurotic edema, flushing, and pain, were quite common.

With the increasing use of these substances in arteriography, various workers have noticed and reported serious reactions related to the mediums and technique of injection. The neurosurgeons were among the first to note untoward reactions following cerebral angiography. Perese and others [2] reported 37 complications with 35% iodopyracet in 234 carotid angiographic studies. These consisted of 1 direct death, 6 deaths hastened by the examination, permanent hemiplegia in 3 cases, transient hemiplegia in 19 cases, sensory changes in 7 which were of transient nature, and 1 retinal artery occlusion. Sutherland and others [3] employed a 25% solution of iodopyracet instead of the usual 35%, and, while obtaining satisfactory cerebral angiograms, noted only 2% complications instead of 16% with the higher concentration.

The utilization of these substances in peripheral angiography and aortography has been associated with occasional serious reactions. There have been reported several instances of both partial and permanent paraplegia and death following the use of acetrizoate in aortography.[4] Other complications have been arterial thromboses of visceral vessels resulting in necrosis and death [5] and also cases of renal shutdown.[6]

Recent experimental work has shed some light on the mechanism of these reactions. Foltz, Thomas, and Ward [7] demonstrated a direct toxic action of iodopyracet on brain nerve cells of the monkey. The same substance injected into the aortas of rabbits produced increased permeability of cord vessels and spinal cord damage.[8] Bloor, Wrenn, and Margolis [9] showed similar changes in vascular permeability and progressive edema in the monkey brain after injecting 50-75% iodopyracet. Recently Tarazi, Margolis, and Grimson [6c] reported the experimental production of spinal cord

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lesions in dogs, using equal amounts of 70% iodopyracet and 70% acetrizoate. The lesions were mainly in the gray matter, were less marked in the white matter, but approached complete transection in some cases. The incidence of severe cord damage was higher with acetrizoate than with iodopyracet, apparently due to the higher iodine concentration in the former. Thomson and co-workers [10] have also produced massive renal destruction by injecting the same mediums directly into one renal artery.

As a result of such experiences, the development of safer contrast materials has been stimulated. Early in 1955 we undertook a clinical study of the salts of diatrizoate (Hypaque) as opacification mediums in angiography. Favorable reports had already appeared regarding the use of a 50% solution of the sodium salt in intravenous urography. Bodner, Howard, and Kaplan [11] reported its use in 300 cases of intravenous urography and noted a higher percentage of diagnostic contrast in the x-ray films and a greatly decreased incidence of undesirable side-effects as compared to acetrizoate, iodopyracet, and iodomethamate (Neo-Iopax). These observations have been substantiated by Engelhardt and Jacobson [12] and by Lentino and others.[13] The latter have also reported favorable experiences with Renografin, a mixture of the sodium and methylglucamine salts of diatrizoate. Our studies are concerned with the sodium salt of diatrizoate and also a mixture of the methylglucamine and sodium salts in the proportion of 2 to 1. Eighty-three patients were studied: 42 for phlebography, 28 for peripheral arteriography, and 13 for aortography.

Untoward Reactions with Different Contrast Mediums Used for Phlebography

	Total No. of Limbs	Systemic Reactions		Local Pain and Spasm			Total No. of Untoward Reactions
		Nausea	Urticaria	Slight	Moderate	Severe	
Sodium salt of diatrizoate	27	1	1*	2	7	4	15
Methylglucamine and sodium salts of diatrizoate...	23	1	...	5	1	1	8
Iodopyracet (controls)	2	2	...	1	...	...	3

*An additional patient developed urticaria after a test dose. Phlebography was not performed.

Phlebography

All the injections for the phlebograms were made precutaneously into a distal vein of an extremity. Fifty-two limbs were injected: 27 with the sodium salt of diatrizoate, 23 with a mixture of sodium and methylglucamine salts, and 2 with iodophyracet. Most of the solutions were made in a 35% concentration for the lower extremities, although a 50% solution was used in the upper extremities. At first, for all cases in which bilateral phlebography was to be performed, it was planned to use iodopyracet in one extremity and diatrizoate in the other. After the first two cases, however, it seemed unjust to subject patients to the well-recognized distressing systemic effects of iodopyracet. The table shows the incidence of untoward reactions.

The opacification of the veins seemed generally more intense with diatrizoate or the combined salts than that to which we had previously been accustomed with iodopyracet (fig. 1). With the use of the sodium salt in 27 limbs, the results were excellent in 10 cases, good in 15, and unsatisfactory in 2. With the use of the methylglucamine and sodium salts in 23 limbs, results were excellent in 13 cases, good in 8, and unsatisfactory in 2. All four cases listed as unsatisfactory actually involved technical errors, so that the medium was not at fault. In the others, a reasonably uniform technique was employed throughout. Despite the small number of cases in this series, there appeared to be a significant difference between results with the mixed salts, which showed excellent intensity in 62%, as compared to those with the sodium salt alone, which showed excellent intensity in only 37%.

Peripheral Arteriography

Peripheral arteriography was performed in 28 cases, none with use of general or spinal anesthesia. All were performed by injection of the medium into the femoral artery, and, since more than one injection was used in some cases in order to demonstrate additional areas, 36 injections were performed in all. In two cases the artery was exposed surgically; in the others a percutaneous route was used. The sodium salt was employed 22 times, and the mixture of methylglucamine and sodium salts 14 times. In all cases a 50% solution was used. The dosage varied from 6 to 15 cc., depending on the nature and location of the lesion and the size of the patient. There were no systemic reactions. Approximately 45% of the patients complained of pain or burning in the injected leg after the pure sodium salt was used for arteriography. In four of these instances the pain was associated with involuntary motion. The opacification was satisfactory in every case but was considered excellent in 73% with the sodium salt and 86% with the mixture (fig. 2).

Aortography

Only 13 patients underwent aortography, and in all of these cases injections were given by the translumbar route with no anesthesia other than local infiltration of the skin with procaine. A 50% solution of the sodium salt was tried in the first four cases, but the opacification was so poor that its use was discontinued. A 90% solution of the mixture of methylglucamine and sodium salts was then used. At room temperature this contains a precipitate which goes into solution when the preparation is warmed to body temperature. This concentrated solution, however, is so viscous that with the ordinary injection technique, using a 17-gauge, thin-walled needle, it was impossible to inject rapidly enough to achieve satisfactory opacification. We also had the impression that the filling of the collateral channels was poor with this 90% solution, possibly because of the viscosity. In the last five cases we used a 70% solution of the mixed salts.

Between 20 and 30 cc. was easily injected, so that the viscosity was not too much of a problem and the opacification was fairly satisfactory. The most striking thing in these cases was the complete absence of any discomfort, and none of the patients seemed even aware that the contrast medium had been injected. There were no systemic reactions.

Comment

Toxicity studies [14] have been performed in the dog and rabbit to compare diatrizoate with acetrizoate. The dosage level required to produce death in the dog, using acetrizoate, was 6,300 mg. per kilogram of body weight and in the rabbit, 5,200 mg. per kilogram. With diatrizoate the dosage levels necessary for death were 13,200 mg. and 12,200 mg. per kilogram respectively. Diatrizoate thus appears to be approximately half as toxic as acetrizoate in the dog and rabbit. Blood-brain barrier studies in the rabbit [14] revealed very slight evidence of extravasation with diatrizoate, both in the form of pure sodium salt and in the mixture of the methylglucamine and sodium salts, as compared to iodopyracet and acetrizoate, both of which produced marked evidence of extravasation. As yet, no experimental studies to determine the possible effect on the spinal cord from large doses of diatrizoate have been performed. Until special studies are done, such as those made by Tarazi, Margolis, and Grimson [6e] with acetrizoate, it should not be assumed that diatrizoate will not produce permanent paralysis when injected into the human aorta. Furthermore, Thomson and co-

Fig. 1.—Phlebogram made with mixture of methylglucamine and sodium salts of diatrizoate. Communicating and perforating veins are well delineated, as is deep venous system.

workers [10] found that diatrizoate was only slightly less toxic than iodonyracet and acetrizoate when injected directly into the renal artery.

In this preliminary study, there were no serious systemic effects after approximately 100 injections of diatrizoate salts for vascular opacification. The only untoward general reactions were mild and few: two transient episodes of nausea not associated with vomiting and one case of urticaria. Local reactions were more frequent and consisted of varying degrees of pain and vasospasm of very brief duration. This reaction was present only after the injection of the medium into smaller vessels and was completely absent after intra-aortic injections. The pain was never severe enough to be intolerable and only rarely caused motion

Fig. 2.—Femoral arteriogram made with mixture of salts of diatrizoate. Although lumen of the popliteal artery is almost thread-like in size, it is still clearly visible along with fine collateral channels.

which interfered with the obtaining of a clear roentgenogram. The vasospasm never led to ischemic symptoms, and there were no thromboses, even in the distal veins of the extremities.

Conclusions

When used for the roentgenographic opacification of blood vessels, diatrizoate (Hypaque) produces considerably fewer untoward general and local reactions than the other commonly used organic iodine compounds. The mixture of the methylglucamine and sodium salts of diatrizoate appears to be better tolerated and to give more intense opacification than the sodium salt alone. Further experimental work is indicated to determine possible direct toxic effects on spinal cord and renal tissues.

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The diatrizoate salts used in this study were supplied by Winthrop-Stearns, Inc., New York.

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CLINICAL NOTES

ORAL CHOLANGIOGRAPHY

PRELIMINARY REPORT

Michael J. Stamatakos, M.D.
and
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Roentgenographic visualization of the bile ducts after oral administration of iopanoic acid (Telepaque) in patients with functioning gallbladders has been mentioned by nearly all authors reporting their experiences with this contrast material; but we have been unable to find any report in the American literature regarding such visualization in patients with nonfunctioning gallbladders. We have frequently visualized the hepatic and common bile ducts 12 hours after the oral administration of iopanoic acid in patients whose gallbladders were not visualized; and, in several of these patients, as in the patient in case 58, the cystic duct was also clearly seen (fig. 1). Heretofore such visualization of the ducts after oral administration of iopanoic acid had been ignored or interpreted as "contrast material" in the alimentary canal, as, for example, in the duodenum. It is, therefore, the purpose of this report to present some of our experiences with oral cholangiography in order to place this method among the biliary diagnostic techniques.

Although a great majority of nonvisualized gallbladders are considered pathological, clinicians occasionally find difficulty in determining whether nonvisualization of the gallbladder is due to pathology in this organ or to impaired excretory function of the liver. The differential diagnosis then becomes important, because surgery is contraindicated in liver disease. This differential can be made by oral cholangiography.

The oral cholangiogram of the patient in figure 2 (case 59) is an example of this fact. A stone obstructing the cystic duct was mentioned in the x-ray report of this patient before operation, when the physician was about to treat him for hepatitis, and was found at surgery. We gave this preoperative opinion because of the concentration of the "dye" in the common duct with nonvisualization of the gallbladder.

Oral cholangiography is so much safer, cheaper, and easier than the intravenous method that we prefer to use it first. The intravenous technique may be used to establish more clearly the presence of a stone in the common duct subsequent to the oral technique, as was done in the patient in case 46, whose cholangiograms are shown in figure 3 and in whom the stone was subsequently removed from the common duct at operation.

The cholangiogram in figure 4*A* (case 14) shows the visualization of the common duct by the oral technique. An intravenous pyelogram is presented on this same patient in order to show that the internal structures of the right kidney could not have been interpreted as biliary radicles by this method. Figure 5 (case 39) shows, for comparison, the common ducts as visualized by both oral and direct "T-tube"

Third-year resident in radiology (Dr. Stamatakos) and Director, Department of Diagnostic Roentgenology (Dr. Taber), Sacred Heart Hospital.

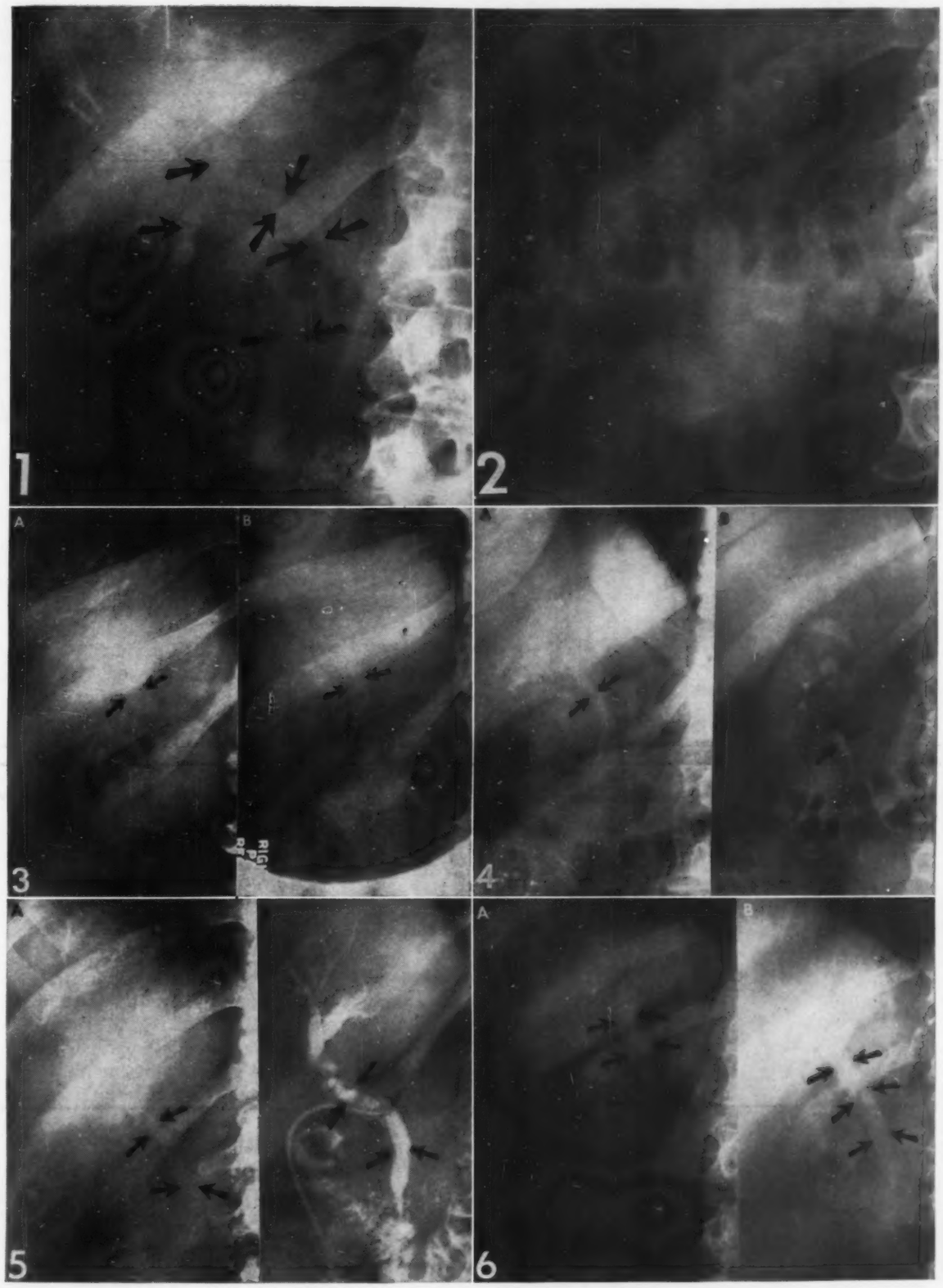

Fig. 1 (case 58).—Oral cholangiogram in patient whose gallbladder was not visualized, showing cystic duct in addition to hepatic and common bile ducts. Fig. 2 (case 59).—Oral cholangiogram in patient whose gallbladder was not visualized, showing hepatic and common bile ducts in patient with a stone obstructing the cystic duct. This had been reported preoperatively on the basis of this one 12-hour film and proved at surgery. Fig. 3 (case 46).—Cholangiograms in patient whose gallbladder was not visualized. *A*, oral cholangiogram showing hepatic and common bile ducts. *B*, intravenous cholangiogram on same patient to verify common bile duct calculus mentioned in original report on *A*. Fig. 4 (case 14).—*A*, oral cholangiogram showing biliary tree. *B*, intravenous pyelogram of right kidney of same patient for comparison, to show that the internal structures of the kidney could not have been interpreted as biliary radicles by this method. Fig. 5 (case 39).—*A*, oral cholangiogram showing biliary radicles. *B*, direct T-tube cholangiogram on the same patient for comparison. Fig. 6 (case 30).—*A*, oral cholangiogram showing biliary radicles. *B*, intravenous cholangiogram on the same patient for comparison.

Data on Sixty-seven Patients in Whom Oral Cholangiography with Iopanoic Acid (Telepaque) Failed to Demonstrate the Gallbladder

Case No.	Common Duct Visualized	Age, Yr.	Pathological Gallbladder Proved at Surgery	Stones in Gallbladder	Stones in Common Duct	Large Common Bile Duct at Surgery	Clinical Evidence of Liver or Common Duct Disease	Remarks
1	Yes	54						No operation
2	Yes	67	Yes	Yes		?		
3	No	39	Yes	Yes	Yes		Yes	
4	Yes	71						No operation
5	Yes	50						No operation
6	Yes	85						No operation
7	Yes	74	Yes	Yes		?		
8	No	49					Yes	
9	No	46	Yes	Yes			Yes	Inflammation of common bile duct
10	Yes	57	Yes	Yes		No		
11	Yes	72	Yes					Papillary adenocarcinoma of gallbladder
12	Yes	40	Yes	Yes		No		
13	Yes	64	Yes	Yes		No		
14	Yes	57						No operation
15	Yes	41						No operation
16	Yes	76	Yes	Yes	Yes			
17	Yes	67						No operation
18	No	64					Yes	
19	Yes	63						No operation
20	Yes	59						No operation
21	No	74					Yes	Carcinoma of stomach with metastasis
22	Yes	38						No operation
23	No	73						Diabetes
24	Yes	68	Yes	Yes		Yes	?*	
25	Yes	67						
26	Yes	49	Yes	Yes		?		
27	Yes	48	Yes			Yes		
28	No	62					Yes	
29	Yes	60	Yes	Yes		Yes		
30	Yes	75						No operation
31	Yes	60						No operation
32	Yes	55	Yes	Yes		Yes		
33	Yes	53	Yes	Yes		?		
34	No	18	Yes				Yes	Inflammation of common duct
35	Yes	56	Yes	Yes		?		
36	Yes	32	Yes	Yes		Yes		
37	No	51	Yes				Yes	Obstruction of common duct
38	Yes	43						No operation
39	Yes	61	Yes			Yes		
40	No	80					?*	
41	No	27					Yes	
42	No	48	Yes			No	Yes	
43	Yes	25					Yes	No operation
44	Yes	58	Yes	Yes		?		
45	No	67						Pyloric obstruction
46	Yes	60	Yes	Yes	Yes			
47	No	72					Yes	
48	Yes	62	Yes	Yes		Yes		
49	No	72			Yes		Yes	Painless jaundice
50	No	79	Yes				Yes	
51	No	55	Yes	Yes		No	Yes	
52	Yes	72						No operation
53	Yes	58	Yes	Yes		Yes		
54	Yes	56	Yes	Yes		?		
55	Yes	58	Yes	Yes	Yes			
56	No	49					Yes	Elevated bilirubin level; obstructive jaundice
57	Yes	80	Yes	Yes		Yes		
58	Yes	68						No operation
59	Yes	61	Yes	Yes		No		
60	Yes	75						No operation
61	Yes	82						No operation
62	Yes	37	Yes	Yes		Yes		
63	No	36	Yes	Yes			?*	Stone in cystic duct
64	Yes	33						No operation
65	Yes	57	Yes	Yes	Yes			
66	Yes	60					Yes	
67	Yes	18	Yes	Yes				

* Patient not examined for clinical evidence of disease of liver or common duct.

cholangiography. Figure 6 (case 30) also shows the bile ducts as visualized by both oral and intravenous techniques for comparison.

Material and Methods

The only patients included in this study are those whose gallbladders had not been removed and whose gallbladders could not be visualized even with "reinforcement." Reinforcement consisted of administration of iopanoic acid a second time 12 hours after the first examination and examination of the patient 12 hours after this, or 24 hours after the first examination, with the patient remaining on a fat-free diet all the while. If the gallbladder was faintly visualized at any time, the patient was excluded from the study. The usual routine for oral cholecystography was followed, including reinforcement for a second day in all cases in which the gallbladder was not visualized the first day.

Results

Of the 724 most recent cholecystograms, 67 (9.2%) failed to demonstrate iopanoic acid in the gallbladders of patients who had not had that organ removed. These 67 cases constitute the present study group (see table). Forty-eight (71.4%) of the 67 patients with nonvisualized gallbladders showed iopanoic acid in the common bile duct. Neither the gallbladder nor the common bile duct was visualized in 19 patients (28.6%); but in only 4 of these 19 patients was this nonvisualization not explained by clinical evidence of liver or common duct disease. Three of the four patients were not examined for such evidence; in the fourth, complete pyloric obstruction explained this nonvisualization. We are unable to explain why the common duct was visualized in two of the patients with clinical evidence of liver disease. These findings suggest to us that the hepatic and common bile ducts take over the concentrating function of the gallbladder when that organ is not functioning.

Summary and Conclusions

Seven hundred twenty-four oral cholecystograms were made, with iopanoic acid (Telepaque) used as the contrast medium, in patients who had not had their gallbladders removed. In every patient with nonvisualization of the gallbladder, either the common bile duct was demonstrable or the patient had clinical evidence of liver or common bile duct disease, with four possible exceptions. In one such exception there was complete pyloric obstruction, and the other three patients were not examined for clinical evidence of liver or common duct disease. These findings indicate that, with a careful examination, the common duct can be visualized in patients with gallbladder disease provided they do not have malfunctioning livers or common bile ducts. Also, with the perfection of this technique, a new diagnostic tool can be added to gastrointestinal studies.

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COUNCIL ON DRUGS

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NEW AND NONOFFICIAL DRUGS

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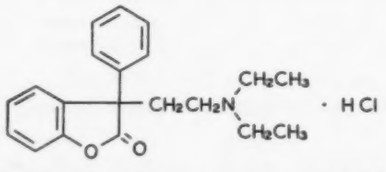
Monographs and supplemental statements on drugs described here and in subsequent editions of New and Nonofficial Drugs are based on the evaluation of available scientific data and reports of investigations. Applicable commercial names for preparations of evaluated drugs are listed at the end of monographs and parenthetically in the text of supplemental statements; additional commercial names of which the Council is informed will be included with subsequently published supplemental statements and annual editions of New and Nonofficial Drugs.

H. D. KAUTZ, M.D., *Secretary.*

Amolanone Hydrochloride.—3-(β-Diethylaminoethyl) -3-phenyl-2-benzofuranone hydrochloride.—The structural formula of amolanone hydrochloride may be represented as follows:



Actions and Uses.—Amolanone hydrochloride is a benzofuranone derivative with both anticholinergic and local anesthetic actions. The drug formerly was used as an intramuscularly administered antispasmodic for the relief of ureteral colic due to calculi, spasm, and instrumentation, a purpose for which it has been withdrawn. Its clinical use is now confined exclusively to topical anesthesia of the lower urinary tract. When it is instilled into the urethra, anesthetic effects are stated to become apparent within 5 minutes and to persist for 15 to 30 minutes. Accordingly, the drug is proposed for the production of topical anesthesia prior to carrying out such urologic procedures as catheterization, urethral dilatation, cystoscopy, and panendoscopy. It is also proposed for the relief of pain in such conditions as interstitial cystitis with ulceration (Hunner's ulcer). However, because some investigators report unsatis-

factory results with this agent, it is difficult to define with certainty the real usefulness of amolanone hydrochloride as a topical anesthetic. Some urologists indicate that the drug is equal or superior to butacaine and procaine; a minority has been unable to produce satisfactory anesthesia. Hence, the ultimate usefulness of this drug as a local anesthetic must await the results of further clinical experience.

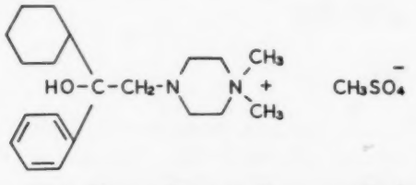
On the basis of prior experience with the drug as a systemic spasmolytic and more recent reports on its use as a topical anesthetic, amolanone hydrochloride may be described as a drug of low toxicity. After intraurethral instillation, only isolated instances of slight giddiness, a transitory burning sensation, or mild dizziness have been reported. There is no evidence that appreciable quantities of the drug are absorbed from the urethral mucosa, and it has been used in patients with lower urinary tract bleeding without untoward effects. In view of its apparently low order of toxicity and the favorable reports so far recorded, further careful trial of the local anesthetic action of this drug is indicated.

Dosage.—Amolanone hydrochloride is employed as a 0.33% solution (3.3 mg. per cubic centimeter) for intraurethral instillation prior to performing urologic procedures. This solution should not be injected into the tissues. The urethra is filled with the solution, and the meatus is closed with a penile clamp. After three to five minutes, the clamp is removed and the procedure begun.

Applicable commercial name: Amethone Hydrochloride.

Abbott Laboratories cooperated by furnishing scientific data to aid in the evaluation of amolanone hydrochloride.

Hexocyclium Methylsulfate.—N-(β-Cyclohexyl-β-hydroxy-β-phenylethyl)-N′-methylpiperazine dimethylsulfate.—The structural formula of hexocyclium methylsulfate may be represented as follows:



Actions and Uses.—Hexocyclium methylsulfate, a synthetic anticholinergic quaternary ammonium compound, is chemically related to certain other drugs of this class and is qualitatively similar to these drugs in pharmacological action. After therapeutic doses have been administered, the autonomic blocking effects of hexocyclium methylsulfate are limited to effector cells innervated by postganglionic cholinergic nerves. At sufficient doses, in animal experiments, the drug inhibits gastrointestinal motility and spasm, diminishes gastric secretion, dilates the pupil, inhibits salivation, relaxes the musculature of the bladder, and counteracts the muscarinic effect of choline esters. In these respects, its principal pharmacological actions as well as side-effects may therefore be described as atropine-like. On a weight basis, the drug is less potent than atropine in vitro but is more potent by a number of tests in vivo. In large doses in animals, hexocyclium methylsulfate (and other compounds of its class) produces ganglionic blockade and curare-like effects interfering with neuromuscular transmission. The metabolic fate and excretion of hexocyclium methylsulfate are not known. The drug is readily absorbed from the gastrointestinal tract. Its onset of action is prompt, and, after ordinary doses, anticholinergic effects persist about three to four hours. No apparent cumulative toxic effect in animals has been observed after prolonged administration of large daily doses.

Hexocyclium methylsulfate may be used for the adjunctive management of peptic ulcer and other gastrointestinal disorders associated with hyperacidity, hypermotility, and spasm in which anticholinergic action might be considered beneficial. The antisecretory response to a fixed dose of hexocyclium methylsulfate appears to be variable. In some patients, gastric secretion is reduced to the point of anacidity; in others, the response is less marked or is minimal. The latter might be attributed to insufficient dosage. For the control of functional disorders of the gastrointestinal tract, especially peptic ulcer, hexocyclium methylsulfate should not be employed to the exclusion of dietary restriction and the use of antacids and sedatives. In certain cases, these measures may be more important in the therapeutic regimen than anticholinergic drugs. In some cases, anticholinergic drugs are not indicated or are without benefit. Although hexocyclium methylsulfate effectively allays hypermotility and hyperacidity, there is no evidence that it possesses greater therapeutic effectiveness than certain other drugs of this class.

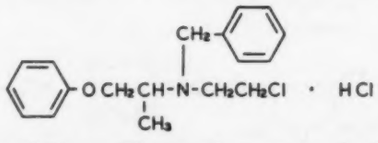
Side-effects associated with hexocyclium methylsulfate are those of anticholinergic drugs in general. Dryness of the mouth (xerostomia) may be encountered when therapeutically effective doses are administered, but it is often transient and is usually mild. Likewise, blurring of vision, difficulty in urination, and palpitation may occur but usually only with excessive doses. Side-effects can often be minimized by adjustment of dosage. As with any new drug, until more experience is gained, physicians should be alert to the possible development of serious untoward effects that may result from continued use of the drug.

Dosage.—The suggested initial dosage for adults is 25 mg. four times daily, administered orally, preferably before meals and at bedtime. The maintenance dosage of hexocyclium methylsulfate should be arrived at by careful adjustment to the needs and tolerance of the individual patient.

Applicable commercial name: Tral.

Abbott Laboratories cooperated by furnishing scientific data to aid in the evaluation of hexocyclium methylsulfate.

Phenoxybenzamine Hydrochloride. — N-(2-Chloroethyl)-N-(1-methyl-2-phenoxyethyl)benzylamine hydrochloride.—The structural formula of phenoxybenzamine hydrochloride may be represented as follows:



Actions and Uses.—Phenoxybenzamine hydrochloride is a potent adrenergic blocking agent of the β-haloalkylamine series. The pharmacology of this drug and

that of its closely related congener, dibenzyl-β-chlorethylamine (Dibenamine), have been carefully studied. The drug selectively blocks the excitatory response of smooth muscle and exocrine glands to epinephrine but does not abolish the inhibitory response of smooth muscle or the myocardium to epinephrine-like agents. Thus, adrenergic blockade with phenoxybenzamine has been compared to "chemical sympathectomy." As with all agents in this category, phenoxybenzamine blocks the response to endogenous or exogenous epinephrine more effectively than it blocks the response to adrenergic nerve stimulation. Hence, the separation of adrenergic blocking agents into adrenolytic and sympatholytic drugs is now believed to be largely artificial, although phenoxybenzamine would ordinarily be considered a representative of the former. The drug reduces or abolishes the pressor response not only to epinephrine but to other sympathomimetic amines as well; in experimental animals, adrenergic blockade with phenoxybenzamine protects against doses of epinephrine that would ordinarily be supralethal. Before adrenergic blockade has been completed, the effects of the drug can be overcome by large doses of epinephrine. Once full blockade has been produced, however, neither epinephrine nor any other drug now known will break through it, and this blocking action is persistent. The precise site of adrenergic blockade with phenoxybenzamine has been accurately pinpointed. Studies have shown conclusively that the drug does not alter or block the release of adrenergic mediator, influence thoracolumbar (sympathetic) outflow or spinal reflex arcs, cause sympathetic ganglionic blockade, nor alter the ability of smooth muscle to contract to nonsympathomimetic musculotropic stimuli. Hence, the drug acts directly and specifically on adrenergic receptor cells in a noncompetitive manner in such a way that the receptiveness to adrenergic (sympathomimetic) stimuli is decreased or abolished.

Although phenoxybenzamine hydrochloride is sparingly soluble in water, at least 20 to 30% of an orally administered dose is absorbed in an active form from the gastrointestinal tract. The duration of action of the drug is prolonged; after a single full dose, adrenergic blockade persists for three to four days or longer. Approximately 50% of the drug appears in the urine and bile within 12 hours after oral administration.

Except for a mild antihistaminic action and moderate miosis, the effects of the drug are predominately those of peripheral vasodilation. Thus, increases in peripheral blood flow and skin temperature and a lowering of blood pressure in patients in both supine and erect positions are the outstanding effects of adrenergic blockade with this agent. The drug also suppresses the hyperglycemic response to epinephrine and blocks epinephrine-induced discharge of corticotropin. The ancillary actions of phenoxybenzamine are minimal; it has no effect on the parasympathetic system and produces only negligible changes in gastrointestinal tone and motility.

Phenoxybenzamine and related β-haloalkylamines previously were considered interesting and valuable laboratory tools for pharmacological research but of little clinical usefulness. However, with the elucidation of the discrete adrenergic blocking properties of these compounds, it became apparent that they might prove useful for the treatment of certain peripheral vascular diseases. Subsequent clinical trials have confirmed not only their efficacy for this purpose but also the superiority of phenoxybenzamine hydrochloride over other chemically related compounds in the series. As might be expected from its pharmacological actions, phenoxybenzamine is more effective in those peripheral vascular diseases characterized by excessive vasospasm than in those of the organic occlusive forms. Thus, the drug is of value in such conditions as Raynaud's syndrome, acrocyanosis, causalgia, chronic vasospastic ulceration of extremities, and frostbite sequelae; it may also be of value in those forms of obliterative or obstructive arterial disease that are complicated by vasospasm of vessels remaining patent. Because of its specificity, effectiveness when given orally, and prolonged action, it is considered preferable to other available adrenergic blocking agents for the medical management of these conditions. If sufficient time is allowed for full adrenergic blockade to develop, a large percentage of patients with vasospastic involvement may be expected to show objective and subjective improvement, including relief of causalgic pain, healing of lesions, clearing of cyanosis or ischemia, and increase in skin temperature. The drug is considered by some authorities to be superior to cervical sympathectomy for most cases of bilateral digital ischemia of the upper extremities, and its therapeutic trial is indicated in cases of severe causalgia before sympathectomy is performed. In patients hospitalized for acute peripheral vascular accidents, phenoxybenzamine also appears to be useful to combat reflex spasm of collateral vessels and of the originally occluded vessel after embolectomy. It has been administered to patients with such conditions as thromboangiitis obliterans (Buerger's disease) and intermittent claudication, but the results have been only fair.

Phenoxybenzamine hydrochloride has been employed for the management of moderate to severe hypertension. Although high doses undoubtedly lower blood pressure, clinical experience has indicated that excessive postural hypotension and other undesirable effects usually outweigh the benefits attained. Hence, the drug is no longer considered useful for this purpose when employed alone. It has, however, been combined in small amounts with the alkaloids of Rauwolfia and Veratrum for the management of hypertension. Other experimental uses of the drug have included the treatment of toxemia of pregnancy, cardiospasm, glaucoma, and the preoperative management of pheochromocytoma. At present there is insufficient evidence to justify the use of the drug in any of these conditions. Since phenoxybenzamine blocks the excitatory but not the inhibitory response of smooth muscle to epinephrine, it has been employed intravenously in patients with status asthmaticus to permit the safer administration of exceedingly large doses of epinephrine. While this is a logical clinical application of the drug's pharmacological actions, this use should at present be considered experimental.

Most of the side-effects of phenoxybenzamine result from the ability of the drug to produce adrenergic blockade and may be considered for the most part ex-

tensions of the therapeutic action. The side-effects most commonly encountered are nasal congestion, miosis, tachycardia, and postural hypotension. Occasionally, sedation and drowsiness occur, and male patients sometimes experience failure of ejaculation. Since the drug blocks salivation in those glands innervated by sympathetic fibers, some degree of xerostomia may occur. The drug produces little, if any, gastric distress, nausea, or vomiting. Most side-effects tend to decrease as therapy is continued. The development of some tolerance after prolonged therapy is likely, although complete refractoriness to the drug is rare.

Phenoxybenzamine is contraindicated in any condition in which a fall in blood pressure may be undesirable or dangerous. It should be given with extreme caution to hypertensive patients with cerebral atherosclerosis or renal damage. In patients with compensated congestive heart failure or coronary artery disease, the tachycardia that sometimes accompanies high doses may precipitate frank failure and anginal attacks. Adverse hematopoietic effects from phenoxybenzamine have not been reported in either laboratory studies or clinical use.

Dosage.—Phenoxybenzamine hydrochloride is administered orally. Dosage is variable and must be individualized according to the therapeutic response and the appearance of side-effects. As a general guide, 10 to 20 mg. once daily may be given to initiate therapy. After four days at this dosage, the daily amount is increased by 10 mg. and thereafter increased by similar increments until a satisfactory response is obtained. The usual maintenance dosage ranges from 20 to 60 mg. once or twice daily. In some patients, particularly those in whom hypertension is present, dosages of 0.2 Gm. or more per day may be necessary. At least two weeks or more are required before full adrenergic blockade develops and maximal therapeutic results are obtained.

Applicable commercial name: Dibenzyline.

Smith, Kline & French Laboratories cooperated by furnishing scientific data to aid in the evaluation of phenoxybenzamine hydrochloride.

COUNCIL ON FOODS AND NUTRITION

Report to the Council

The following paper was presented at the symposium, "The Relation of Proteins and Amino Acids to Human Nutrition," in Los Angeles, May 21, 1956. This symposium was sponsored by the Council on Foods and Nutrition, with the cooperation of the Los Angeles County Medical Society and the School of Medicine, University of California at Los Angeles. This report is the sixth and final report of this series, which will be available in monograph form.

PHILIP L. WHITE, SC.D., *Secretary.*

ROLE OF HORMONES IN PROTEIN METABOLISM

Robert E. Olson, M.D., Ph.D., Pittsburgh

Despite the large volume of research that has been published in the field of endocrinology during the past 50 years, the precise biochemical function of a hormone has yet to be established. It is clear, however, that several hormones influence protein metabolism in such a way as to produce effects of considerable interest to the clinician as well as to the biochemist. The purpose of this presentation will be to consider both the clinical and biochemical implications of the hormonal adjustments in a number of common medical situations.

The object of endocrine control might be stated to be an adjustment of metabolism through the intervention of numerous hormones acting in specific biochemical or biophysical areas to produce optimum substrate concentrations, adequate enzyme activity, and appropriate work performance in all organs and tissues in a variety of physiological and pathological states. In some instances, two hormones may stimulate a single process in different directions. Such an arrangement lends balance to homeostasis, increases the inertia of the organism, and makes for more stability under changing metabolic conditions.

Because of its supercatalytic function in metabolism, the biological activity of hormones is influenced by many other parameters such as genetic strain, sex, age, diet, activity, emotionality, bacterial flora, physical environment, dosage, and time of observation. In certain biological responses, Ingle [1] has demonstrated that the hormones may play only a permissive role, making possible but not being solely responsible for the given response.

The role of the hormones in protein metabolism is considered herein in connection with five clinical situations that involve imbalance of endocrine secretions under physiological or pathological conditions. The physician who is constantly faced with these problems must judge the endocrine changes per se and the relative contribution of many of the parameters such as diet, age, heredity, infections, or inflammation that are important in influencing the final clinical

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picture. The role of diet therapy in specific situations and its relationship to the endocrine aspects of each case will be discussed.

Growth

Childhood and adolescence afford unusual opportunities for study of the effects of various hormones. In adults, hormonal dysfunction is manifested largely by unseen metabolic and physiological disturbances, as is the case with nutritional disorders in the adult, with the exception of frank deficiency disease. In childhood or adolescence, these same metabolic disorders involving nutrition and hormonal secretion may alter growth and differentiation of tissues and cause a marked deviation from the usual patterns of somatic growth and development.

Normal growth depends upon many factors, including genetic control, endocrine control, and nutritional status. Furthermore, normal digestion, absorption, and circulation must be present in order to guarantee the delivery of nutrients to their locus of action. Normal kidney function is essential for the maintenance of an optimum internal environment for the occurrence of anabolic reactions. Therefore, growth failure may result from a wide variety of factors, including inborn errors of metabolism, endocrine insufficiency, nutritional deficiency, and breakdown in the function of any of the major organ systems.

The following hormones are known to be concerned with the processes of growth: the growth hormone of the anterior pituitary, estrogens, testosterone and other androgens, insulin, and thyroxin and other thyroid hormones. All of them promote the storage of nitrogen as tissue protein and thus stimulate a positive nitrogen balance under optimum conditions. None of these hormones alone is sufficient for normal growth, and all are thought to have dissimilar modes of action.

Pituitary growth hormone is chiefly responsible for growth in the years prior to puberty. In these years, there is a high serum phosphorus level, an increased plasma growth hormone level, and no epiphysial closure. In the absence of pituitary growth hormone, pituitary dwarfism occurs. Thyroxin and insulin are also required for growth in this period; if either is absent, dwarfism also occurs. At birth, the ratio of upper to lower skeletal segments is 1.7:1.0; at age 10 years, it is 1:1. A hypothyroid dwarf (cretin) who has the height of a 2-year-old retains infantile proportions, that is, a ratio of upper to lower skeletal segments of 1.5:1.0.[2] Dwarfs produced by diabetes or a lack of pituitary growth hormone develop more mature proportions, although their total height is reduced. Since the thyroid hormone is important in differentiation as well as in growth, hormonal therapy of cretins is of the utmost importance in order to preserve normal development as well as growth.

Just prior to the onset of puberty, pituitary gonadotropins are elaborated. They stimulate the gonads to secrete their characteristic steroid hormones that stimulate the growth of both bone and soft tissue. Testosterone and other androgens cause growth of both bone and soft tissue, maturation of the skeleton, and closure of the epiphyses. The main metabolic effect of estrogens, on the other hand, is the stimulation of bone anabolism through retention of calcium and phosphorus. In the male, the gonads secrete androgens, and the adrenal cortex secretes small amounts of estrogens. In the female, whose gonads secrete estrogens, the pubertal growth spurt and skeletal maturation are caused by elaboration of an anabolic steroid in the adrenal cortex.

Pituitary growth hormone does not produce epiphysial closure; hence, gigantism can result from excessive pituitary growth hormone secretion. Although the androgens stimulate growth, they also provide self-limitation of growth by closure of the epiphyses. It is probable that they also inhibit pituitary growth hormone and thus cause the decrease in serum inorganic phosphorus and in plasma growth hormone concentration that occurs at puberty.

In order to explore the mechanisms by which these hormones that influence growth exert their physiological effects, numerous experiments have been performed to study their effects upon protein and amino acid metabolism. It is impossible to review completely the whole literature on this subject, but selected studies can be summarized.

Growth hormone exerts a profound effect upon the nitrogen and fat metabolism of the mammal. Lee and Ayres [3] observed that hypophysectomized rats lost more protein and less fat from their body stores than did pair-fed normal control animals over a period of 30 days. Hoberman [4] investigated the metabolism of N^{15}-glycine in normal, hypophysectomized, and hypophysectomized–growth hormone–treated rats. By analysis of the data on isotope distribution in tissue protein, plasma amino acid nitrogen, and urinary nitrogen, he was able to calculate the rates of protein anabolism and catabolism, the rates of amino acid anabolism and catabolism, and the size of the amino acid pool. He concluded that hypophysectomy caused a decrease in the rate of protein synthesis, an increase in amino acid catabolism, a decrease in the size of the amino acid pool, and no change in the other rates. These alterations in the metabolism of nitrogen in the hypophysectomized rat were returned toward normal by the administration of growth hormone.

Bartlett and Gaebler [5] studied the metabolism of N^{15}-glycine in the normal dog during nitrogen balance and after the injection of growth hormone that induced a positive nitrogen balance. Analysis of the isotope data suggested that in this species as well as in the rat, growth hormone caused a reduction in the amino acid catabolism of tissue and an increased rate of protein synthesis. Whether the effect upon protein synthesis or amino acid catabolism was primary could not be ascertained from the isotope data.

In an attempt to delineate further the role of growth hormone, Russell [6] studied its effect on the rate of urea formation in nephrectomized animals, with and without administration of exogenous amino acids. In these experiments, a single injection of growth hormone was given one hour prior to the beginning of observations on the blood urea nitrogen. As is shown in figure 1, when no amino acids were given, the effect of growth hormone was negligible; if casein

hydrolysate was administered, however, growth hormone had a marked effect, in proportion to dose, upon the rate of urea formation. The nitrogen retained was converted to protein, since free amino acid levels in the blood actually fell during treatment with growth hormone. In eviscerated, nephrectomized rats, Russell was able to show that growth hormone suppressed the rise in plasma amino acid nitrogen seen in control

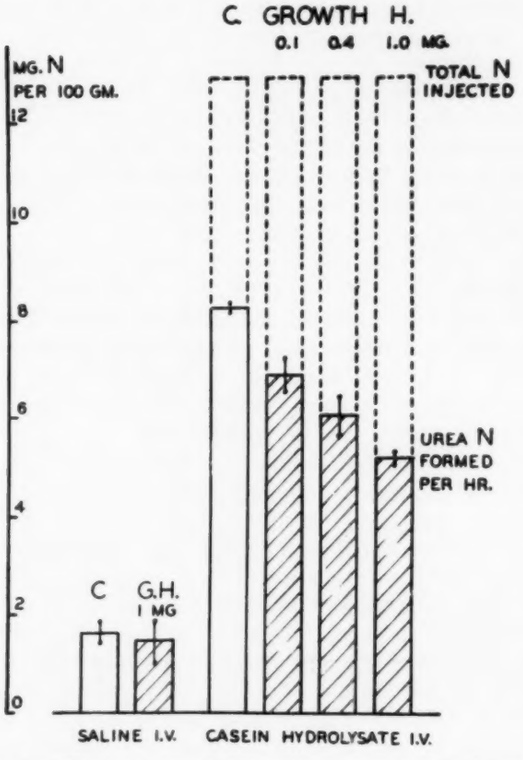

Fig. 1.—Effect of growth hormone on rate of urea formation during first hour after infusion of saline solution and of casein hydrolysate in nephrectomized rats. After Russell.[6]

animals. This observation in animals deprived of the liver, which is the chief site of amino acid catabolism, suggests that growth hormone is concerned chiefly with the reaction: amino acids ⇄ protein. All of the data cited, including those obtained in isotope studies, support the view that the primary action of growth hormone is to promote the synthesis of tissue protein from cellular amino acids and thus shift the equilibrium toward protein anabolism.

The action of growth hormone appears to be dependent upon normal energy production and utilization in tissues and upon the availability of substrate in adequate quantities. Hazelwood, Bennett, and Nelson[7] have shown that the nitrogen-retaining effect of growth hormone is not seen in rats deficient in vitamin A, pyridoxine, pantothenate, choline, or protein. When dietary protein is increased 6 to 24%, nitrogen retention on a fixed dose of growth hormone increases in the same proportion. Beare, Beaton, and McHenry[8] observed similar negative effects of growth hormone therapy in rats deficient in riboflavin and pantothenate but noted that rats deficient in thiamine responded normally.

Recently it was demonstrated that insulin is required for the optimum action of growth hormone. Milman, DeMoor, and Lukens[9] found that three to four times the minimum maintenance dose of insulin was required in depancreatized cats to assure full responsiveness to growth hormone activity. This observation holds an important clinical lesson for us: If childhood diabetes is not treated vigorously, it may lead to significant dwarfism.

The fact that both hypothyroid and hyperthyroid animals grow poorly and are distinctly less responsive to growth hormone than are normal animals focuses interest on the influence of thyroid hormone upon protein metabolism. There is definitely an optimum thyroid hormone level for normal protein metabolism.

Protein Metabolism in Various Thyroid Conditions in Man

Condition	No. of Patients	Rate of Protein Synthesis, Mg. of Nitrogen/Kg./Day
Hypothyroid	6	354
Euthyroid	4	756
Hyperthyroid	1	126

Crispell, Parsons, and Hollifield[10] have shown by means of isotope techniques that the rate of protein synthesis is decreased in both myxedema and hyperthyroidism. Their data are presented in the table. The response of myxedematous patients to L-triiodothyro-

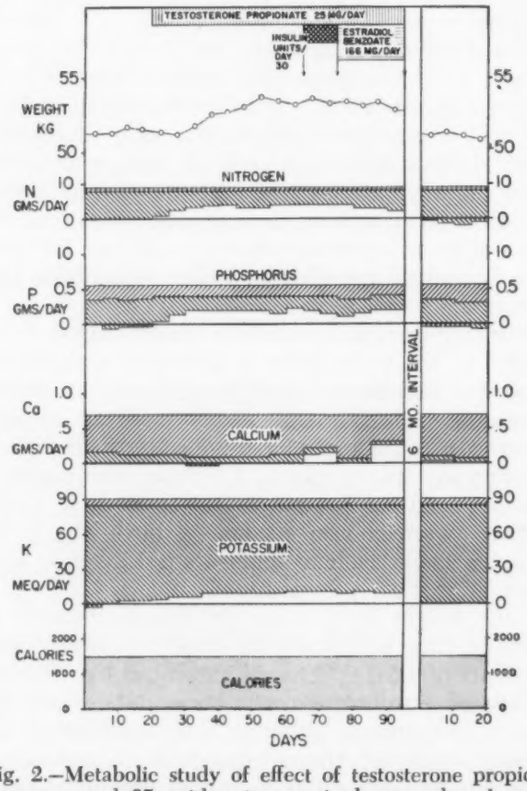

Fig. 2.—Metabolic study of effect of testosterone propionate in woman, aged 25, with osteoporosis due to adrenal cortical hyperfunction (Cushing's syndrome). Redrawn from Albright and others.[11]

nine was slow. Initially, there was a marked negative nitrogen balance as edema fluid containing protein was mobilized, and there was no increase in the rate of protein synthesis for an appreciable period of time in the treatment. The mode of action of thyroid hor-

mone is still unknown. The postulate that it produces adverse metabolic effects in hyperthyroid states by uncoupling oxidative phosphorylation is now being questioned. It seems very clear that growth hormone is dependent for its efficacy upon several variables. These include a normal nutritional status with an adequate intake of calories, protein, and vitamins, and a normal underlying endocrine structure, with particular reference to insulin and thyroxin.

Androgens play a major role in stimulating growth and a positive nitrogen balance, especially in adolescence. Available evidence suggests that androgens, like growth hormone, influence the reaction: amino acids $\rightleftharpoons$ protein, in the direction of protein synthesis. Whether they do so by promoting anabolism of tissue protein from amino acids or by inhibiting catabolism of tissue protein to amino acids is not settled. It has been observed in man that panhypopituitarism, which is unresponsive to growth hormone therapy, responds to testosterone propionate therapy with a typical protein anabolic effect. Testosterone, in contrast to growth hormone, may influence nitrogen balance favorably in patients who exemplify unfavorable conditions for anabolism, such as those with adrenal cortical hyperfunction (Cushing's disease) and those who are undergoing weight reduction on low-calorie, low-protein diets. The response of a patient with adrenal cortical hyperfunction to testosterone therapy is shown in figure 2.[11]

The response to androgen is not dependent upon the pituitary, the adrenal cortex, or the pancreas in the alloxan-diabetic rat. Sirek and Best,[12] however, have shown that depancreatized dogs do not respond to testosterone given intramuscularly with the usual fall in plasma amino acid nitrogen and a positive nitrogen balance unless insulin is added to the regimen. Homburger and Pettengill [13] have shown that both diet and genetic strain affect the response of mice to androgen. Although the renotropic, clitorotropic, and adrenal suppressor effects of testosterone given intramuscularly were regularly noted, markedly restricted diets (in calories or protein), exceptionally high-protein diets, or variant strains of mice abolished the anabolic response to testosterone. Although androgens appear to be more independent of nutritional status and of the intactness of other endocrine glands in exercising their anabolic effects than does growth hormone, the physiological activity of the androgens does not exist *in vacuo* but is related to many conditions of cellular physiology.

Starvation

Caloric undernutrition, partial or absolute, is a stress for the mammal, and appropriate adaptation to it requires the interplay of endocrine factors. It has been amply demonstrated that persons subjected to ablation or inactivation of the adrenal cortex or pituitary tolerate starvation poorly, fail to conserve their tissues in an appropriate way, and rarely survive a prolonged fast. The following marked changes in endocrine activity occur with prolonged undernutrition: amenorrhea in females and aspermatogenesis in males; decreased metabolic rates; pigmentations of the skin; hypotension; and weakness attributed to attenuated function of the pituitary, thyroid, adrenals, and gonads in association with malnutrition. In Zubiran's [14] study, involution and atrophic changes in the glands were demonstrated in material from 195 autopsies. Diminished functional activity was demonstrated by hormonal determinations in 201 patients and other functional tests in an additional 318 patients. Lowered pituitary activity with diminished trophic hormone secretion was thought to precede the changes in the target organs, and, with improvement in nutritional status, normal function was reestablished in most cases.

In acute starvation, the changes in endocrine activity are phasic, with secretion of large amounts of hormone by some glands during the transition from the fed to the fasting state and decreased output once a fasting state has been established. In figure 3 are presented the balances of nitrogen, potassium, and sodium for the famous Levanzin during the period of his 31-day fast that was studied by Benedict in 1915.[15] It may

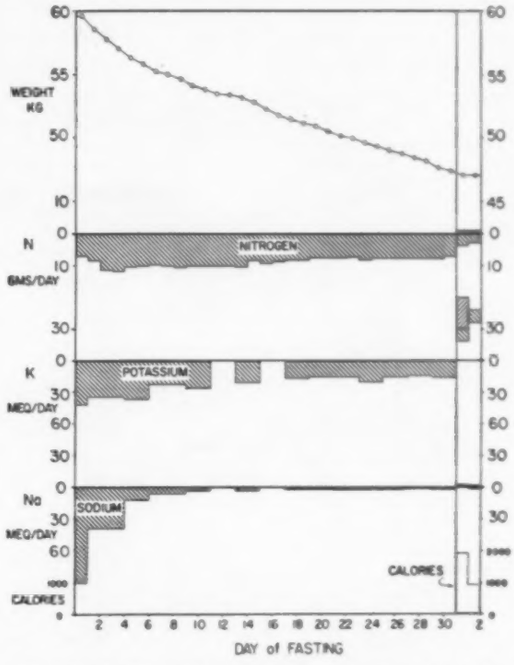

Fig. 3.—Metabolic study of man, aged 40, who voluntarily underwent 31-day fast. Redrawn from Benedict.[15]

be noted that total urinary nitrogen excretion increased from 7 Gm. on the 1st day to 11 Gm. on the 4th and then gradually diminished to 7 Gm. again on the 31st day. The first increase undoubtedly represents the loss of liver glycogen and other labile carbohydrate during the first two days of the fast with consequent loss of its protein-sparing ability. This increased catabolism of protein is largely dependent upon 11-oxycorticoids acting to increase gluconeogenesis. The second phase of change in nitrogen excretion, which is a slow decline from the 4th to the 31st day, is associated with a gradual decrease in over-all metabolic rate, a decrease in body size, and a diminution of the output of hormones by the pituitary, thyroid, and adrenal cortex. Urinary potassium excretion paralleled the urinary nitrogen excretion during the fast, as might be expected from the mobilization of lean body tissue

except during the first few days when extra potassium was excreted during deglycogenation. Urinary sodium excretion was markedly decreased after the second day of the fast, presumably as a result of increased aldosterone secretion, an effect that persisted during the fast despite a presumed decline in pituitary hormone level.

Another case is that of a 36-year-old schizoid white male who voluntarily undertook a 30-day fast in order to improve his mind. He lost 16 kg. (35 lb.) in weight over the month of his fast prior to admission to our metabolic unit and at that time showed all the signs associated with starvation. He was 69 in. (175 cm.) tall, weighed 46.3 kg. (102 lb.), had a blood pressure of 70/40 mm. Hg, and a pulse rate of 60. He was cold, weak, and acrocyanotic. Urinalysis revealed a specific

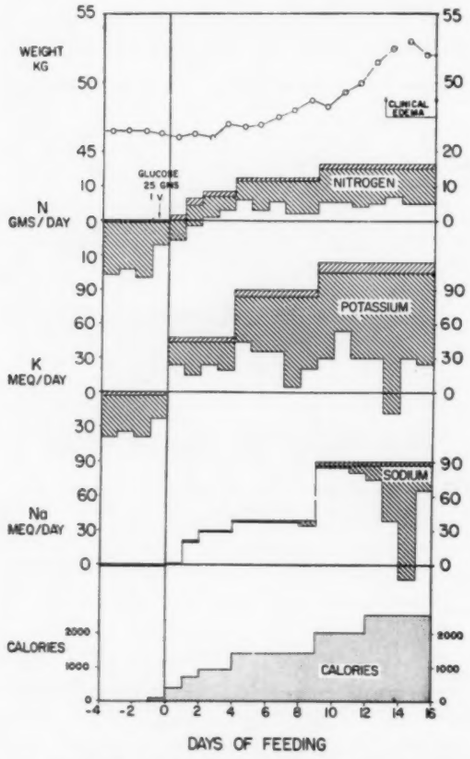

Fig. 4.—Metabolic study of nutritional repletion of man, aged 37, who had undergone 33-day fast.

gravity of 1.009; acetone 4+; and sugar, albumin, and sediment negative. The hematocrit reading was 50%, and the white blood cell count was 8,200 per cubic millimeter. The blood sugar level was 56 mg. per 100 cc.; serum nonprotein nitrogen, 39 mg. per 100 cc.; total serum protein, 7.3 Gm. per 100 cc., with an albumin-globulin ratio of 1.7; serum sodium level, 138 mEq. per liter; serum potassium level, 5.3 mEq. per liter; serum chloride level, 111 mEq. per liter; and carbon dioxide, 25 mEq. per liter. Oxygen consumption was 155 cc. per minute, equivalent to a basal metabolic rate of –30%. The patient was placed on a metabolic-balance study and maintained in the fasting state for three days, whereupon he was repleted nutritionally by gradually increasing amounts of food over a 17-day period. The balance data of his inpatient stay are presented in figure 4. The details of this study are presented elsewhere.[16]

On the patient's admission, the fasting plasma 17-hydroxycorticoids were 28 mcg. per 100 cc., his urinary nitrogen level 15 Gm., and his urinary potassium output 40 mEq. per day. The reduction in urinary nitrogen and potassium seen in Levanzin on his 30th day of fasting was not noted in this patient, possibly because of less reduction in adrenal cortical activity in our patient during the fast. When the patient's fast was broken by the administration of 25 Gm. of dextrose intravenously on his 34th day, the carbohydrate produced both a nitrogen-sparing and a potassium-sparing effect. Thereafter he was fed by mouth, and promptly the nitrogen, potassium, and sodium balances became positive. His retention of sodium was conspicuous; in fact, he excreted practically no sodium despite increased sodium intake for almost two weeks and developed clinical edema on the 15th day. This behavior is typical of that of many starved patients upon refeeding and is a variant of starvation edema. The serum protein levels were normal throughout the study. Whether excessive aldosterone secretion persists into the period of refeeding a starved person or whether other changes in renal physiology persist to provide the basis of the abnormal sodium retention is a subject of continuing study.

Fasting provides a stress that invokes an adrenal cortical discharge which stimulates gluconeogenesis from protein and possibly from fat. Adequate sodium retention is assured through activation of mechanisms (not mediated via the pituitary) of aldosterone secretion. During continued fasting, anterior pituitary secretions are reduced, with concomitant reduced activity of the thyroid, gonads, and adrenal cortex. With prolonged chronic undernutrition, atrophy of these glands may occur.

Diabetic Acidosis

Diabetes mellitus results from a disparity in the rate of insulin secretion by the pancreas and its demand by other tissues. In many instances, particularly in overweight, middle-aged diabetics without ketosis, appreciable amounts of insulin are secreted.[17] In these patients with more mild, nonketogenic diabetes, diet therapy is usually effective; insulin is rarely needed, and negative nitrogen balance is not seen. On the other hand, patients with the juvenile type of diabetes tend to secrete little, if any, insulin. They require insulin for maintenance, and, upon withdrawal of insulin, they develop ketosis, acidosis, and marked negative nitrogen balances. The onset of ketosis in such diabetics is followed by an increase in 17-hydroxy-11-oxycorticoids in both plasma and urine, with an increase in gluconeogenesis.

A study of the disposition of C^{14}-glucose in persons with stable, nonketogenic diabetes and in those with labile, ketogenic diabetes by Miller and his colleagues[18] has shown that, whereas the former group exhibited normal rates of turnover and oxidation of glucose to carbon dioxide, the latter group demon-

strated both overproduction and decreased oxidation of glucose to carbon dioxide. Increased hepatic gluconeogenesis in persons with labile diabetes has been shown by Bearn, Billing, and Sherlock [19] to be quickly reduced by insulin therapy.

In figure 5 are charted the metabolic balances for nitrogen, potassium, and sodium in a young person with ketogenic diabetes studied by Atchley and coworkers.[20] While receiving 85 units of insulin per day, this diabetic was in nitrogen, potassium, and sodium

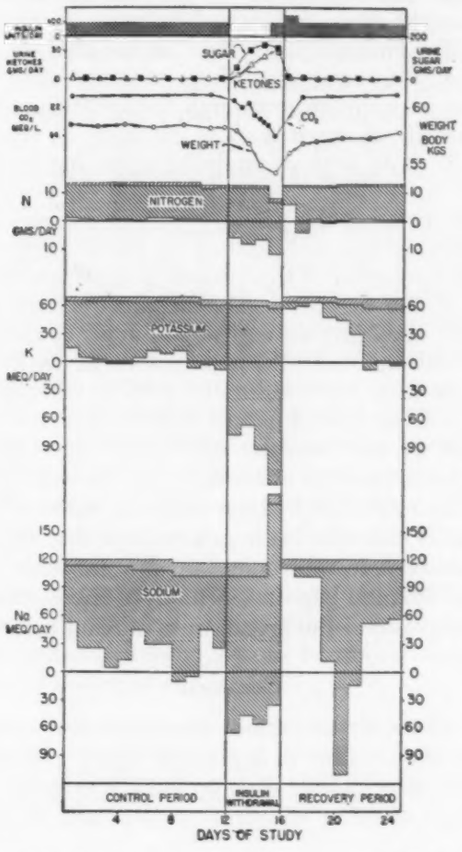

Fig. 5.—Metabolic study of man, aged 25, with ketogenic diabetes from whom insulin was withdrawn and then reinstated. Redrawn from Atchley and others.[20]

balance and excreted no sugar or ketone bodies in his urine. Upon cessation of insulin therapy, however, the development of acidosis was rapid. It was indicated by the prompt appearance of acetone and sugar in the urine, decrease in blood bicarbonate, loss of sodium and water, and onset of nausea, vomiting, and prostration. These changes were accompanied by catabolism of lean body tissue, with concomitant losses of nitrogen and potassium. As is shown in figure 5, administration of insulin quickly reversed these changes. The effect of insulin in ketogenic diabetes illustrates well its anabolic effect. The interrelationship of insulin with growth hormone and androgens in promoting anabolism of protein has been mentioned earlier in this discussion.

Although the mode of action of insulin has been the subject of intensive research for over 30 years, its precise biochemical function is not known. Recent studies by Levine and Goldstein [21] suggest that insulin is concerned with the control of the permeability of cells to glucose. Whether this single mode of action can account for the multiple effect of insulin activity, that is, increased glucose oxidation, improved oxidative phosphorylation, increased lipogenesis, decreased gluconeogenesis, and increased protein anabolism, is controversial at the present time. The proponents of this hypothesis argue that the greater availability of glucose within the cell would initiate reactions leading to these multiple effects. Further research is necessary to establish, with certainty, the exact locus or loci of insulin action.

Trauma

Selye [22] advanced the idea that many kinds of nonspecific somatic trauma could elicit a stereotyped physiological response dominated by adrenal cortical discharge. There is little doubt that some variant of this general adaptation syndrome is seen in many conditions in man. The evidence for such a response in starvation and in diabetic acidosis has been stated. Other stresses that provide such responses include infections, burns, intoxications, cold, muscular fatigue, and trauma—both surgical and nonsurgical.

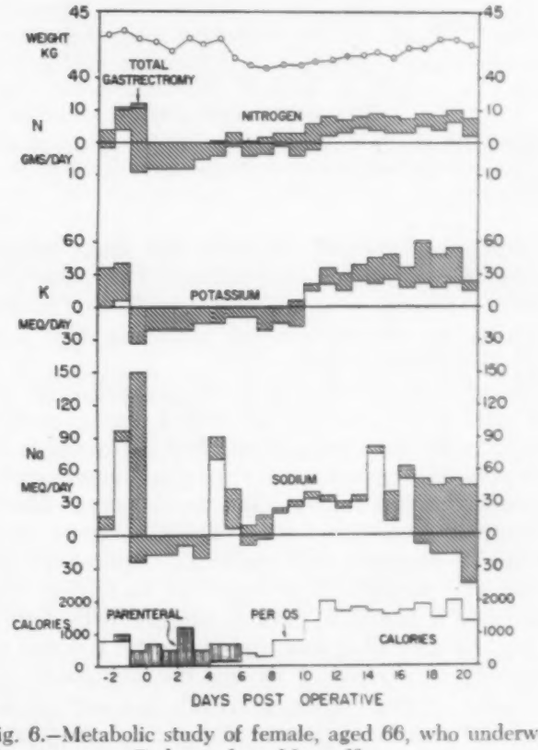

Fig. 6.—Metabolic study of female, aged 66, who underwent total gastrectomy. Redrawn from Moore.[23]

The metabolic response to surgery has been the subject of extensive studies by Moore and Ball.[23] A metabolic balance study of one patient is presented in figure 6. This response followed a transthoracic total gastrectomy, splenectomy, and pancreatectomy. Although nitrogen and caloric intakes were not optimum immediately after surgery, nitrogen catabolism was excessive and was not spared by glucose infusions. Potassium losses and sodium retention also character-

ized the immediate postoperative period, and not until approximately 15 days after the operation did positive nitrogen and potassium balances ensue, followed by sodium diuresis. Whether the negative nitrogen and potassium balances would have been so large had the patient been more adequately fed during the immediate postoperative period is answered by the data of Wilkinson and associates.[24] They found that amino acids given intravenously and/or feeding in the immediate postoperative period did not improve nitrogen balance after surgery. In figure 7 is presented a study by Howard and co-workers [25] of a 24-year-old healthy white male with a fractured tibia, who, despite adequate nitrogen and caloric intakes during the

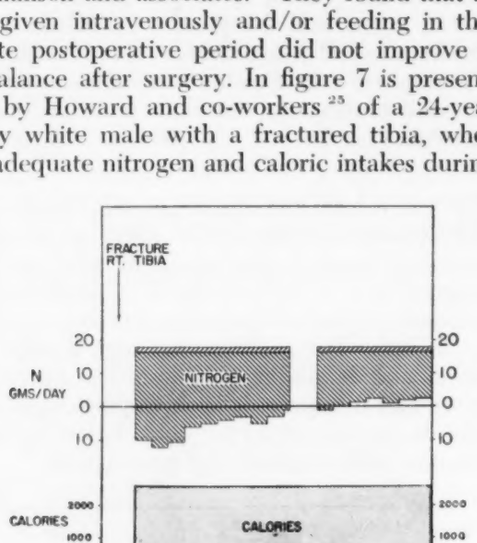

Fig. 7.—Metabolic study of young man during convalescence from major skeletal fracture. Redrawn from Howard and others.[25]

post-traumatic period, showed the same extensive period of negative nitrogen balance. This phase of the response to injury is associated with an increased secretion of adrenal cortical hormones that are at least partially responsible for it.

Moore [23] reports that a sizable catabolism of nitrogen after injury is correlated with a prompt recovery. Nutritionally depleted patients lose less nitrogen after injury but, in general, also have a poorer anabolic phase and a less satisfactory convalescence. The diet therapy of surgical and other patients suffering trauma should be designed with endocrine responses in mind. Whenever possible, it is important to replete undernourished individuals, prior to surgery, with diets rich in protein and other essential nutrients. It is not wise, however, to force-feed during the immediate postoperative period when nutrients are not well assimilated and the organism is in a catabolic phase. It is equally important to supply calories and other nutrients in increased amounts during the period of anabolism. The increased appetite of the patient is often a guide to the time of onset of this period.

Inflammation

Since the demonstration by Hench and associates,[26] in 1950, of the anti-inflammatory properties of cortisone given in pharmacological amounts to patients with rheumatoid arthritis, tremendous strides have been made in the treatment of other nonbacterial inflammatory diseases. Rheumatic fever, lupus erythematosus, scleroderma, asthma, urticaria, exfoliative dermatitis, ulcerative colitis, lymphoma, and nephrosis are some diseases in which corticoid therapy may cause dramatic improvement.[27]

One may ask how it is possible to stimulate recovery from disease and promote health with agents that are associated with catabolic effects on metabolism. In most instances the early negative nitrogen balance, which occurs after initiation of corticoid therapy, diminishes, and a positive nitrogen balance is obtained with weight gain and actual increase in lean body mass. The antiphlogistic effect of the steroids, which counters the catabolic effect of the inflammatory process, may greatly outweigh the catabolic effect of the steroids themselves. The paradox of treating a catabolic state with a catabolic agent has been considered by Roberts,[28] who has adduced evidence to show that one of the primary roles of adrenal cortical hormones is the mobilization of tissue protein. The final translocation of this protein is determined by the needs of the organism. The hepatectomized rat, for example, uses protein and amino acids derived from other labile stores for the regeneration of the liver, and the same may be true for the patient with hepatitis. In the well-nourished patient without such a need, the labilized protein may be catabolized and appear in the urine as urea. In many instances, the nitrogen balance may be shifted by increasing the intake of dietary protein. It has also been pointed out that increasing the dietary potassium may not only improve the potassium balance but may actually decrease the catabolic response of the organism to adrenal cortical hormones.

Comment

The effect of the various hormones discussed upon protein metabolism is dependent upon a number of variables that include diet, previous nutritional status, intactness of other endocrine organs, and the genetic

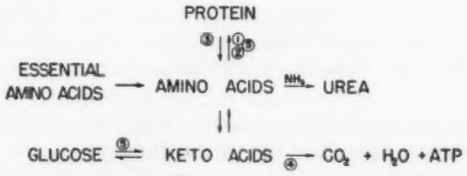

Fig. 8.—Action of hormones in reference to certain pathways of intermediary metabolism. Hormones are indicated as influencing reactions shown in direction of arrow nearest number. Hormones listed are (1) growth hormone, (2) androgen, (3) adrenal corticoids, (4) thyroid hormone, and (5) insulin.

differentiation of enzymatic patterns. Only with a knowledge of all these parameters is it possible to predict with any certainty the effect of a given hormone on protein or intermediary metabolism. Figure 8 is a diagrammatic summary of our knowledge of the action of the hormones in reference to certain pathways of intermediary metabolism. The studies to date strongly suggest that those hormones which affect protein metabolism act mainly to influence the equilibrium: amino acids $\rightleftharpoons$ protein.

Pituitary growth hormone, insulin, and androgens are protein–anabolic in over-all effect, although it appears from the data available that their specific modes of action are different. Androgens appear to be anti-catabolic, growth hormone proanabolic, and insulin proanabolic, although it is possible that insulin acts indirectly through its effect upon glucose uptake. The specific action of thyroxin is unknown. It appears to be protein-anabolic under certain conditions and protein–catabolic under others; it is certainly prometabolic. The corticoids appear to be protein-catabolic but probably not amino acid–catabolic, since the net effect of corticoid action upon gluconeogenesis and urea formation is quite variable. Information about these interrelationships is incomplete, but progress is being made in defining the role of the hormones in relation to cellular physiology. An area for continuing intensive research is the precise function for a hormone at the molecular level.

The homeostatic responses that occur in growth, starvation, and injury are governed in an important way by intricate changes in hormonal secretion. The metabolic changes that occur in diabetes mellitus and after the administration of cortisone for the control of inflammatory disease involve other endocrine adjustments that must also be appreciated if optimum management is to be instituted. Diet therapy bears an important relationship to optimum management in all of these states; the need for and acceptability of nutrients –not only dietary protein, but others–must be understood if optimum growth, convalescence, and health are to be obtained. Endocrinology and nutrition are inseparably associated at the cellular level; their important interrelationship should be understood in the practice of medicine as well.

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FOREIGN SCHOLARS IN THE MEDICAL SCIENCES

During the latter part of June a three-day conference on medical education for foreign scholars in the medical sciences was held at the University of Wisconsin. The conference was financed by the China Medical Board of New York, Incorporated and cosponsored by that board, the Association of American Medical Colleges, and the Conference Board of Associated Research Councils. It was attended by about 50 selected foreign scholars and about 20 American educators.

The three-day discussions were centered around the philosophy of higher education in the United States, the education of a physician in the United States, evaluation of the applicant for medical education, the organization and objectives of a medical school, the development of the medical curriculum, and recent trends in medical education. After the presentation of papers on the aforementioned topics the conferees were divided into small discussion groups in which exceedingly stimulating and valuable exchange of opinion occurred.

Although the conference was designed primarily to give the foreign scholars a comprehensive insight into the philosophy and methodology of medical education in the United States, it served as an effective "two-way street" in giving the guest faculty an insight into the educational philosophy and methodology of the nations represented by the guest scholars. One attending this conference gained the impression that there is deep concern and interest in the problems of medical education wherever it is being conducted. This is manifested by the experimental approaches that are being utilized by schools in other countries and that are designed to meet their needs in the education and training of medical personnal.

Although the basic objectives of medical education in different areas of the world appear to have a universal character, special needs necessitate wide variations in emphasis and approach in curriculum content as well as in educational philosophy and methodology. The pattern most satisfactory and best adaptable to our needs might fall short of meeting those of other areas. One cannot participate in a conference of this type without gaining increasing respect and admiration for the fine contributions to medical education and knowledge that are being made throughout the world. It emphasized the constant challenge and value of intercommunication between all nations in the important and dynamic field of medicine. An experience with a group such as this also emphasizes the importance of making our best education and training experiences available to competent foreign scholars so that they may return to their homes with an appreciation of a thoroughly worthwhile experience while in the United States. It is to be hoped that conference of this nature can be developed in various areas throughout the United States where groups of foreign scholars in medical sciences are sufficiently large to merit such efforts.

POSTGRADUATE MEDICAL EDUCATION

The third annual list of postgraduate courses for physicians appears in this issue of THE JOURNAL (page 1773) as compiled by the Council on Medical Education and Hospitals of the American Medical Association. It deserves the attention of all physicians in the United States. The list should serve as a ready reference throughout the year beginning September 1, 1957. Since 1938, lists of courses for the continuation education of physicians have been published in THE JOURNAL, at first quarterly, then semiannually, and annually beginning in 1955.

The present list, as was also the case last year, includes only the various kinds of primarily educational postgraduate programs that appear to be courses. Although physicians also continue their education by reading of the medical literature, by consultations with colleagues, by attendance at hospital conferences, and by attendance at medical society conventions, assemblies, and meetings, the Council on Medical Education and Hospitals believes that it is most useful to the profession and to the further increase in quality of the courses themselves if the annual listing concentrates on the more formal course type of postgraduate medical education. Lists of medical society conventions, assemblies, and meetings have for some time been published monthly elsewhere in THE JOURNAL.

It is important to note that, unlike such other lists as those of medical schools, internships, and residencies published annually by the Council on Medical Education and Hospitals, the lists of postgraduate courses are not based upon survey or inspection and

thus do not represent approval by their inclusion in the list nor disapproval by omission from the list. The list is published on the basis of replies to inquiries made to the medical schools, hospitals, and medical societies in the United States. Every effort is made to make the list as complete as possible in order to provide a single reference for physicians who wish to continue their education. It is probable that the educational value of the courses varies considerably.

The Council on Medical Education and Hospitals has become increasingly concerned with the whole field of postgraduate medical education because it involves, or should involve, all of the medical profession throughout the 40 or more years of practice of its members. The field has been extensively and carefully studied by the Council. More than a year ago, to secure broad-based recommendations for a program of action the Council could take to be of assistance in the further development of postgraduate medical education, an *ad hoc* Advisory Committee for Postgraduate Medical Education was appointed; it is still active. It consists of some of the leaders in medical education from the viewpoint of medical schools, of hospitals, and of medical societies, with the viewpoints of private general practice and of specialty practice also represented. The advisory committee was requested to study the field and its problems and to recommend a program through which the Council can be of assistance. The beneficial influence of the Council on Medical Education and Hospitals in undergraduate and graduate medical education is generally recognized. It was thought that the Council might have an equally effective influence, in cooperation with the other interested organizations, in the important postgraduate phase of medical education.

Such a long-range program is being developed. Although continuation education has some unique features as compared with undergraduate and graduate medical education, the advisory committee and the Council believe that the experience gained from the growth of undergraduate and graduate medical education to its present high level of effectiveness can be applied to education in the postgraduate period. Certain common denominators of medical education discovered during the growth of undergraduate and graduate medical education can be applied fully to postgraduate medical education to serve as a guide to those sponsoring the more formal courses and other programs. A concomitant initial approach was the development of a statement of objectives for this field of medical education, on the assumption that a common purpose generally agreed upon can provide a useful focus for activities in this field. Therefore, the first task which the advisory committee undertook was the development of a guide that included a statement of objectives as well as of basic principles regarding postgraduate medical education programs. This guide was endorsed by the Council and, in June, 1957, was adopted by the House of Delegates of the American Medical Association for publication and general distribution. It has been mailed to those known to be interested and active sponsors in this field. The guide is available upon request to the Council on Medical Education and Hospitals of the American Medical Association.

Another part of the over-all program that the advisory committee recommended is that the Council increase its activities as a national center of information on postgraduate programs. Toward the accomplishment of this, it seemed desirable that all information on postgraduate courses and related activities channel through the Council offices. The Editor of THE JOURNAL and the Council staff agreed early this year that it would be more appropriate and useful for all notices of postgraduate courses to come through the Council offices than for notices supplementary to the annual list to be published independently in the Medical News section of THE JOURNAL. It is hoped that such publication of supplementary notices under the Council heading is an interim measure only, becoming unnecessary when all courses are planned far enough in advance for inclusion in the annual list. It should be noted that one of the basic principles in the guide for postgraduate medical education programs is that "the curriculum of any postgraduate medical education program should be the result of thoughtful planning well in advance of the date scheduled for the beginning of the program. . . . The value of a postgraduate program depends to a considerable extent on the amount of thoughtful planning that occurred months in advance of its beginning."

Before the guide was submitted to the House of Delegates of this Association, various organizations were shown copies of preliminary drafts and their suggestions were solicited, in order that all those groups who are thoughtfully concerned with postgraduate medical education can proceed in a concerted manner, as well as to tap their resources of experience. These organizations include the Association of American Medical Colleges, the American Academy of General Practice, the American College of Physicians, the American College of Surgeons, and the Advisory Board for Medical Specialties. It was not intended that these organizations approve the guide before it was approved by the parent organization, the House of Delegates of the American Medical Association. It was considered important that the major interested groups have an informal opportunity to participate in its formulation. As with all other guides and essentials published by the American Medical Association, it is expected that this guide will undergo evolution and revision.

ORGANIZATION SECTION

REPORT OF THE SECTIONS OF THE SCIENTIFIC ASSEMBLY

NEW YORK MEETING, JUNE 3-7, 1957

SECTION ON ANESTHESIOLOGY

The Section on Anesthesiology met on Wednesday and Thursday morning, June 5 and 6, in the Terrace Room of the Plaza Hotel, and on Wednesday afternoon, June 5, met jointly with the Section on Diseases of the Chest in the Tudor Room of the Henry Hudson Hotel.

Dr. Scott M. Smith, Chairman, Salt Lake City, presided over the meeting on Wednesday morning, and Dr. Richard H. Barrett, Vice-Chairman, Hanover, N. H., presided on Thursday morning. Dr. John F. Briggs, St. Paul, Chairman of the Section on Diseases of the Chest, presided over the joint meeting on Wednesday afternoon. The Scientific Program was presented as listed in the Official Program with the exception of one discussor, Dr. Paul H. Lorhan, Kansas City, Kan., who was ill and unable to attend.

At a business meeting held on Wednesday, June 5, the Section voted to establish the office of Secretary-Elect for a term of three years, at the end of which time the Secretary-Elect will automatically assume the duties of Secretary. (If the office of the Secretary is vacated prior to the normal three-year period, the Secretary-Elect will become Secretary.)

At the Wednesday morning session, the Section Delegate, Dr. Edward B. Tuohy, Los Angeles, reported on the activities of the House of Delegates of the American Medical Association, and the Section Representative to the Scientific Exhibit, Dr. Edwin L. Rushia, Augusta, Ga., introduced the Scientific Exhibitors.

The following officers were elected: Chairman, Dr. Kenneth C. McCarthy, Toledo, Ohio; Vice-Chairman, Dr. Joseph H. Failing, Los Angeles; Secretary, Dr. Daniel C. Moore, Seattle; Secretary-Elect, Dr. Vincent J. Collins, New York, for a term of one year since the Secretary's term expires in 1958; Delegate, Dr. Edward B. Tuohy, Los Angeles; Representative to the Scientific Exhibit, Dr. Edwin L. Rushia, Augusta, Ga., and Representative to the American Board of Anesthesiology, Stuart C. Cullen, Iowa City.

At the end of the last session on Thursday morning, the Alternate Delegate, Dr. Urban H. Ebersole, Boston, reported on the actions of the House of Delegates, since the Delegate, Dr. Edward B. Tuohy was detained in the session of the House of Delegates.

SECTION ON DERMATOLOGY

The Section on Dermatology met on Wednesday, Thursday, and Friday mornings in the Tudor Room of the Henry Hudson Hotel. The Chairman, Dr. Herbert Rattner, Chicago, presided.

At the first session on Wednesday, the Section Delegate, Dr. Winfred Showman, Tulsa, Okla., presented his report, outlining the actions taken at the current session of the House of Delegates; Dr. Stanley Huff, Chicago, presented the report of the Committee on Scientific Exhibits; Dr. Beatrice Kesten, New York, reported to the Section on the activities of the American Board of Dermatology; Dr. Herbert Rattner, Chicago, reported to the Section on the activities of the Editorial Board of the A. M. A. *Archives of Dermatology*, and Dr. John Downing of Boston read the report of the Committee on Industrial Dermatoses. The Section established the position of Assistant Secretary for a term of one year.

All papers were presented and discussed by the authors and discussors as listed in the official program.

At the session on Thursday morning, the following officers were elected: Chairman, Dr. Earl D. Osborne, Buffalo; Vice-Chairman, Dr. Leslie M. Smith, El Paso, Texas; Assistant Secretary, Dr. Edward P. Cawley, Charlottesville, Va. The terms of office of the Secretary, Dr. Clarence S. Livingood, Detroit; Delegate, Dr. Winfred Showman, Tulsa, Okla., and Alternate Delegate, Dr. Maurice Costello, New York, do not expire until 1958. Dr. J. Walter Wilson, Los Angeles, was appointed Representative to the American Board of Dermatology for a term of three years.

At the close of the last session, the new Chairman of the Section, Dr. Earl Osborne, and the Vice-Chairman, Dr. Leslie Smith, were presented.

SECTION ON DISEASES OF THE CHEST

Two meetings of the Section on Diseases of the Chest were held in the Tudor Room of the Henry Hudson Hotel on Tuesday and Wednesday afternoon, the second meeting being held jointly with the Section on Anesthesiology. The third meeting of the Section was a joint meeting with the Section on Radiology and was held in the Ballroom of the Henry Hudson Hotel, Thursday afternoon.

At the business meeting on Wednesday, June 5, the following officers were elected: Chairman, Dr. John F. Briggs, St. Paul, and Vice-Chairman, Dr. M. Jay Flipse, for the ensuing year; Secretary, Dr. Burgess L. Gordon, Philadelphia, for the ensuing four years; Delegate, Dr. Hollis E. Johnson, Nashville, Tenn., for the ensuing year, and Representative to the Scientific Exhibit, Dr. Edwin R. Levine, Chicago, for the ensuing year.

SECTION ON EXPERIMENTAL MEDICINE AND THERAPEUTICS

The sessions of the Section were held in the Ballroom of the Plaza Hotel on Tuesday, Wednesday, and Thursday afternoon, June 4, 5, and 6, the Thursday afternoon session being a joint meeting with the the Section on Internal Medicine.

At the business meeting on Wednesday, June 5, the following officers were elected: Chairman, Dr. George E. Burch, New Orleans; Vice-Chairman, Dr. Charles H. Burnett, Chapel Hill, N. C.; Secretary, Dr. Elliot V. Newman, Nashville, Tenn.; Delegate, Dr. Edgar V. Allen, Rochester, Minn.; Representative to the Scientific Exhibit, Dr. Joseph F. Ross, Los Angeles.

SECTION ON GASTROENTEROLOGY AND PROCTOLOGY

Meetings of the Section on Gastroenterology and Proctology were held on Wednesday, Thursday, and Friday mornings, June 5, 6, and 7, in Room 4 on the 4th floor of the Coliseum. The Friday morning meeting was held jointly with the Section on Pathology and Physiology.

At the business meeting on Thursday, June 6, the following officers were elected for the ensuing year: Chairman, Dr. Everett D. Kiefer, Boston; Vice-Chairman, Dr. A. W. Martin Marino, Brooklyn, N. Y.; Secretary, Dr. William H. Dearing, Rochester, Minn., and Representatives to the Scientific Exhibit, Dr. Gordon McHardy, New Orleans, and Dr. Willard H. Bernhoft, Buffalo. The present Delegate, Dr. Stuart T. Ross, Garden City, N. Y., and Alternate Delegate, Dr. Garnet W. Ault, Washington, D. C., remain in office for one more year.

SECTION ON GENERAL PRACTICE

The Section on General Practice met in the Ballroom of the Henry Hudson Hotel on Tuesday and Wednesday afternoons, June 4 and 5. It held a joint meeting on Friday morning, June 7, with the Section on Urology in the Colonnades Room of the Essex House. All papers and discussions were presented as listed in the official program.

At the business meeting on Wednesday afternoon, June 5, the following officers were elected: Chairman, Dr. Charles E. McArthur, Olympia, Wash., and Vice-Chairman, Dr. S. A. Garlan, New York, for the ensuing year. The terms of the following officers end in 1958: Secretary, Dr. Eugene I. Baumgartner, Oakland, Md.; Delegate, Dr. Lester D. Bibler, Indianapolis; Alternate Delegate, Dr. Milton B. Casebolt, Kansas City, Mo., and Representative to the Scientific Exhibit, Dr. I. Phillips Frohman, Washington, D. C.

SECTION ON INTERNAL MEDICINE

A luncheon meeting of the Past-Chairmen, the present Executive Committee, and the Trustees of the Billings Fund of the Section on Internal Medicine was held at the Plaza Hotel, New York, on Wednesday, June 5. Those present were: Dr. A. Carlton Ernstene, Chairman, and Drs. Walter L. Bierring, Howard P. Lewis, Walter L. Palmer, Charles T. Stone, William D. Stroud, Henry M. Thomas Jr., and R. H. Kampmeier. The minutes of the Executive Committee on June 12, 1956, were read and approved. It was announced that Dr. Richard B. Capps, nominated as Alternate Delegate to the House of Delegates at the 1956 meeting, was unable to accept the nomination. Dr. Truman G. Schnabel was nominated by letter ballot to this position subsequent to the last meeting. Furthermore, it was announced that Dr. Robert Loeb of New York declined the Billings Lectureship; Dr. John R. Paul of New Haven, Conn., was out of the country, and therefore Dr. C. Sidney Burwell of Boston was selected to give the lecture.

The scientific program of the Section for 1958 was discussed. It was voted to hold again a Joint Session with the Section on Experimental Medicine and Therapeutics. After discussion of what might be done to improve attendance at the Section Meetings, the Secretary was instructed to explore the possibility of mailing preliminary programs to those registering for the Section on Internal Medicine in the recent previous years.

The following officers were elected: Chairman, Dr. Albert M. Snell, Palo Alto, Calif.; Vice-Chairman, Dr. Thomas P. Findley Jr., Augusta, Ga.; Secretary, Dr. Rudolph H. Kampmeier, Nashville, Tenn.; and Representative to the Scientific Exhibit, Dr. Henry T. Ricketts, Chicago. Dr. Charles T. Stone Sr. of Galveston, Texas, and Dr. Truman G. Schnabel, Philadelphia, continue as Delegate and Alternate Delegate, respectively, to the House of Delegates, until Jan. 1, 1959. There are no vacancies on the Board of Trustees of the Billings Fund. Dr. Wendel M. Stanley, Berkeley, Calif., was selected as the Billings Lecturer for 1958. Drs. John R. Paul, New Haven, Conn., and George W. Thorn, Boston, were chosen as first and second alternates respectively.

The scientific meetings of the Section were held on Wednesday and Thursday mornings, June 5 and 6, and Thursday afternoon, June 6, in the Ballroom of the Plaza Hotel, the third session being a joint meeting with the Section on Experimental Medicine and Therapeutics. All papers and discussions were presented as listed in the official program.

SECTION ON LARYNGOLOGY, OTOLOGY, AND RHINOLOGY

The Section on Laryngology, Otology, and Rhinology held its sessions in the Ballroom of the Park Sheraton on Tuesday, Wednesday, and Thursday afternoon, June 4, 5, and 6. Dr. Kenneth L. Craft, Indianapolis, Vice-Chairman of the Section, presided in the absence of the Chairman, Dr. Gordon D. Hoople of Syracuse, N. Y., who was ill and unable to attend the meeting. It was voted to send Dr. Hoople regrets of his illness and hopes for his speedy recovery. The Secretary of the Section, Dr. Hugh Kuhn, read the Chairman's address. All other papers were read and discussed as presented in the Official Program.

The Section voted that any funds now in the possession of the Section or which may come into the possession of the Section be managed by the current Chairman, Vice-Chairman, and Secretary. Dr. Walter Heck, Representative to the Scientific Exhibit, was given a vote of thanks for organizing the excellent scientific exhibits for the Section. The Chairman called attention to the honors given three exhibits in the Section.

The following officers were elected: Chairman, Dr. Alden Miller, Los Angeles; Vice-Chairman, Dr. Lester Brown, Atlanta, Ga., and Representative to the Scientific Exhibit, Dr. Walter E. Heck, San Francisco, for the ensuing year. The Secretary, Dr. Hugh A. Kuhn, Hammond, Ind., was elected in 1956 for a term of three years, ending in 1959. The Delegate, Dr. Gordon F. Harkness, Davenport, Iowa, and the Alternate Delegate, Dr. Dean Lierle, Iowa City, were elected in 1955 for two-year terms ending Dec. 31, 1957.

SECTION ON MILITARY MEDICINE

The three scheduled meetings of the Section on Military Medicine were held, as programmed, on the afternoons of June 4, 5, and 6, in Room 1, 2nd Floor, Coliseum. All authors and discussants were present and appeared as listed in the Official Program, with the following exceptions: Dr. William A. Altemeier, Cincinnati, notified the Secretary by telephone on the afternoon of June 3 that he would be unable to be present because he had just operated on a patient whose condition he felt precluded his leaving the city. Dr. Altemeier forwarded his dscussion notes via air mail, special delivery, to the Secretary, and the notes were read at the meeting by the Chairman of the Section, Dr. Russel V. Lee.

At the business meeting on June 5, the following were elected to serve as officers for the Section for the 1958 meeting: Chairman, Major General Silas B. Hays, M. C., U. S. Army, Washington, D. C.; Vice-Chairman, Rear Admiral Alphonse McMahon, M. C., U. S. N. R., St. Louis; Secretary, Col. Charles H. Bramlitt, M. C., U. S. A. F., Washington, D. C.; Representative to the Scientific Exhibit, Col. Douglas B. Kendrick, M. C., U. S. Army, Washington, D. C.; Delegate, Dr. Charles L. Leedham (Colonel, M. C., U. S. Army [Retired]), Cleveland; and Alternate Delegate, Dr. Charles P. Campbell, Hackensack, New Jersey.

The following resolution was adopted: "RESOLVED, That the Chairman of the Section appoint a committee to meet with appropriate agencies of the American Medical Association to determine the status of the military medical man in the American Medical Association." The Chairman appointed the following committee for this purpose: Drs. I. S. Ravdin and R. A. Kern, Philadelphia, and Alphonse McMahon, St. Louis.

SECTION ON MISCELLANEOUS TOPICS

Session on Medical Communication

A Session on Medical Communication was held in the Section on Miscellaneous Topics on Tuesday afternoon, June 4, in the Coliseum.

General Elbert De Coursey, Fort Sam Houston, Texas, Chairman, presided over the session. A panel discussion on methods of medical communication, including the written word, spoken word, place of the motion picture, preparation and use of lantern slides, and preparation and demonstration of scientific exhibits was presented.

Session on Allergy

A Session on Allergy was held in the Section on Miscellaneous Topics on Wednesday afternoon, June 5, in the Coliseum.

Drs. Carl E. Arbesman, Buffalo, and Ethan Allan Brown, Boston, Co-Chairmen, presided over the session. The papers were presented as listed in the Official Program.

Session on Legal Medicine

A Session on Legal Medicine was held in the Section on Miscellaneous Topics on Thursday afternoon, June 6, in the Tudor Room of the Henry Hudson Hotel.

Dr. Herman A. Heise, Milwaukee, Chairman, presided over the session. In addition to a paper on Chemical Tests for Intoxication by Dr. Heise, a Mock Trial demonstration was presented.

SECTION ON NERVOUS AND MENTAL DISEASES

The Section on Nervous and Mental Diseases held three sessions on Tuesday, Wednesday, and Thursday afternoon, June 4, 5, and 6, in the Colonnades Room, Essex House. Dr. Karl O. Von Hagen, Chairman of the Section, presided. All of the papers were read and discussed as listed in the Official Program.

The business meeting of the Section took place on Wednesday afternoon, June 5, when the following officers were elected: Chairman, Dr. Harold C. Voris, Chicago; Vice-Chairman, Dr. Paul H. Hoch, New York; Secretary, Dr. Adolph L. Sahs, Iowa City; Delegate, Dr. Francis M. Forster, Washington, D. C.; Representative to the Scientific Exhibit, Dr. Benjamin Boshes, Chicago.

SECTION ON OBSTETRICS AND GYNECOLOGY

The Section on Obstetrics and Gynecology met in the Ballroom of the Henry Hudson Hotel on Wednesday, Thursday, and Friday morning, June 5, 6, and 7. On Thursday, it met jointly with the Section on Pediatrics. The papers and panel discussions were presented as listed in the Official Program.

The business meeting was held on Friday morning when the following officers were elected: Chairman, Dr. Woodward D. Beacham, New Orleans; Vice-Chairman, Dr. Curtis J. Lund, Rochester, N. Y.; Secretary, Dr. Keith P. Russell, Los Angeles; Delegate, Dr. Ralph E. Campbell, Madison, Wis.; and Representative to the Scientific Exhibit, Dr. Frederick H. Falls, River Forest, Ill.

SECTION ON OPHTHALMOLOGY

The Section on Ophthalmology held its meetings on Wednesday, Thursday, and Friday morning, June 5, 6, and 7, in the Ballroom of the Park Sheraton Hotel. The Chairman, Dr. Algernon B. Reese, New York, presided over the meetings, and all of the papers were read and discussed as listed in the Official Program.

At the meeting of the executive session of the Section on Thursday, June 6, the following actions were taken:

The minutes of the 1956 meeting were approved as published in THE JOURNAL of the A. M. A. The Secretary, Dr. Harold G. Scheie, read a report on the present status of the Section on Ophthalmology; Dr. John S. McGavic read a supplementary report on the American Board of Ophthalmology, and Dr. Parker Heath read the report of the Knapp Testimonial Fund Committee. The reports of the following representatives from the Section were accepted:

American Board of Ophthalmology
Committee on National Registry of Ophthalmic Pathology
Committee on Scientific Exhibit
Committee on Museum of Ophthalmic History
Committee on National Conference of Medical Nomenclature
American College of Surgeons, Board of Governors
Committee on American Orthoptic Council
Lucian Howe Fund
Committee on Research in Ophthalmology and Blindness
Delegate to Pan American Congress of Ophthalmology
Committee on Civil Defense
Committee on Eye Banks
Delegate to House of Delegates
Program Committee

The Section voted to table the report of the representatives to the Committee on Optics and Visual Physiology for further study.

Dr. Charles E. Jaeckle proposed that the Section extend a vote of thanks to Dr. William L. Benedict for all his services to the Section. This was unanimously approved, and a standing ovation was extended to Dr. Benedict.

Committee members and Section representatives were appointed or reappointed as follows: Dr. M. Luther Kauffman reappointed to American Committee on Optics and Visual Physiology for a period of three years; Dr. Algernon B. Reese reappointed to Committee on National Registry of Ophthalmic Pathology; Drs. Burton Chance, Hans Barkan, and Frederick C. Cordes reappointed to the Committee on National Conference of Medical Nomenclature; Dr. John McLeod appointed to the Committee on American Orthoptic Council for a period of three years; Drs. A. D. Ruedemann Sr. and Michael J. Hogan reappointed to the Committee for Research in Ophthalmology and Blindness; Drs. William A. Mann, P. Robb McDonald, Warren A. Wilson, and Charles E. Jaeckle appointed to the Committee on Civil Defense; Drs. Ramon Castroviejo and Phinizy Calhoun appointed to the Committee on Eye Banks; Drs. Alson E. Braley, Ralph W. Danielson, George M. Haik, Wendall C. Irvine, John L. Matthews, W. Howard Morrison, C. Wilbur Rucker, and Frederick H. Theodore reappointed to the Program Committee for a period of three years; Dr. James H. Allen reappointed as delegate to Pan American Congress of Ophthalmology, and Drs. Derrick Vail and W. Guernsey Frey as Delegate and Alternate Delegate, respectively, to the International Federation of Ophthalmological Societies.

The Section nominated three members, Drs. A. D. Ruedemann Sr., S. Rodman Irvine, and Webb P. Chamberlain Jr. for selection of one to serve on the Board of Governors of the American College of Surgeons for the term 1958 to 1961, and nominated three members, Drs. Arthur Gerard DeVoe, Kenneth L. Roper, and Angus L. MacLean, for selection of one by the Board of Regents to serve on the Advisory Council for Ophthalmology, American College of Surgeons.

The Executive Committee recommended the adoption of a report submitted by the senior trustee of the Herman Knapp Fund, Parker Heath, that the present number of trustees be increased to three members, the existing two members to elect the third. This was adopted by the Section.

The Nominating Committee submitted the name of Dr. John McGavic to be representative to the American Board of Ophthalmology for a four-year term from 1957 to 1961. This was approved by the Section.

Members of the Committee on Award of Knapp Medal were elected as follows: Drs. Frederick A. Davis, Chairman; C. Wilbur Rucker; and Phinizy Calhoun.

The following officers of the Section were elected: Chairman, Dr. Dohrmann K. Pischel, San Francisco, and Vice-Chairman, Dr. Ralph W. Danielson, Denver, for the ensuing year; Secretary, Dr. Harold G. Scheie, Philadelphia, for a three-year term; Delegate, Dr. Ralph O. Rychener, Memphis, and Alternate Delegate, Dr. Harvey E. Thorpe, Pittsburgh, for a two-year term beginning in January, 1957.

The Prize in Ophthalmology was awarded in absentia to Dr. William L. Benedict, Rochester, Minn., by the Chairman, Dr. Reese.

The Knapp Medal was awarded to Drs. Goodwin Breinin and Moldaver of New York. Dr. Harold Falls presented the award to the senior author, Dr. Breinin.

At the executive session on Friday, June 7, Dr. Ralph O. Rychener, Memphis, reported on the actions of the House of Delegates, and Dr. Frank W. Newell reported on the Scientific Exhibit. The $250 prize for the best exhibit was awarded to Dr. David Volk of Western Reserve University School of Medicine, Cleveland, for his exhibit on Conoid Ophthalmic Lenses: An Original Development in Subnormal Vision Aids. Dr. Newell reported that this exhibit also received a Certificate of Merit from the Committee on Awards of the Council on Scientific Assembly and that a Certificate of Merit was also awarded to the exhibit on Precancerous Melanosis of the Conjunctiva by Drs. Algernon B. Reese and Bradley R. Straatsma of the Institute of Ophthalmology.

SECTION ON ORTHOPEDIC SURGERY

The meetings of the Section on Orthopedic Surgery were held on Wednesday, Thursday, and Friday, June 5, 6, and 7, in the Coliseum. On Friday morning, the Section met jointly with the Section on Physical Medicine.

At the business meeting on Thursday morning, the Section voted to establish the position of Assistant Secretary. The following officers were elected: Chairman, Dr. Frederick R. Thompson, New York; Vice-Chairman, Dr. Lenox Baker, Durham, N. C.; Secretary, Dr. H. Herman Young, Rochester, Minn.; Assistant Secretary, Dr. J. Vernon Luck, Los Angeles; Delegate, Dr. H. Relton McCarroll, St. Louis, and Representative to the Scientific Exhibit, Dr. James I. Kendrick, Cleveland.

SECTION ON PATHOLOGY AND PHYSIOLOGY

The meetings of the Section on Pathology and Physiology were held on Wednesday, Thursday, and Friday mornings, June 5, 6, and 7, in the Coliseum, the last meeting being a joint one with the Section on Gastroenterology and Proctology.

At the business meeting on Thursday, the following officers were elected: Chairman, Dr. Edwin F. Hirsch, Chicago; Vice-Chairman, Dr. Thomas M. Peery, Washington, D. C.; Secretary, Dr. Hugh A. Edmondson, Los Angeles; Delegate, Dr. Lall G. Montgomery, Muncie, Ind., and Representative to the Scientific Exhibit, Dr. Samuel A. Levinson, Chicago.

SECTION ON PEDIATRICS

The Section on Pediatrics held meetings on Tuesday and Wednesday afternoons, June 4 and 5, in the Terrace Room of the Plaza Hotel. The Tuesday session was a joint meeting with the Section on Radiology. On Thursday morning, it met jointly with the Section on Obstetrics and Gynecology in the Ballroom of the Henry Hudson Hotel.

At the business meeting on June 5, the following officers were elected: Chairman, Dr. George M. Wheatley, New York; Vice-Chairman, Dr. Harry F. Dietrich, Beverly Hills, Calif.; Secretary, Dr. Wyman C. C. Cole Sr., Detroit; Delegate, Dr. Woodruff L. Crawford, Rockford, Ill.; and Representative to the Scientific Exhibit, Dr. F. Thomas Mitchell, Memphis, Tenn.

SECTION ON PHYSICAL MEDICINE

The meetings of the Section on Physical Medicine were held on Wednesday and Thursday morning, June 5 and 6, in the Forum Room, the Park Sheraton Hotel, and on Friday morning, June 7, jointly with the Section on Orthopedic Surgery in the Coliseum. The Chairman, Dr. Louis B. Newman, presided, and all papers were read and discussed as listed in the Official Program.

At the business meeting on Thursday, the following officers were elected: Chairman, Dr. Miland E. Knapp, Minneapolis; Vice-Chairman, Dr. Arthur L. Watkins, Boston; Secretary, Dr. Earl C. Elkins, Rochester, Minn.; Delegate, Dr. Walter J. Zeiter, Cleveland; and Representative to the Scientific Exhibit, Dr. Harold Dinken, Denver.

SECTION ON PREVENTIVE MEDICINE

The Section on Preventive Medicine met on Wednesday, Thursday, and Friday morning, June 5, 6, and 7, in the Coliseum. On Wednesday morning, the Section met jointly with the American Academy of Occupational Medicine; on Thursday morning with the American Association of Public Health Physicians, and on Friday morning with the Aero Medical Association.

The following officers were elected: Chairman, Dr. Bruce Underwood, Washington, D. C.; Vice-Chairman, Dr. Robert A. Kehoe, Cincinnati; Secretary, Dr. Frank Princi, Cincinnati; Delegate, Dr. Rutherford T. Johnstone, Los Angeles; and Representative to the Scientific Exhibit, Dr. Paul A. Davis, Akron, Ohio.

SECTION ON RADIOLOGY

The Section on Radiology held its meetings on Tuesday afternoon, June 4, jointly with the Section on Pediatrics in the Terrace Room, Plaza Hotel; on Wednesday afternoon, June 5, in the Coliseum, and on Thursday afternoon, June 6, jointly with the Section on Diseases of the Chest in the Ballroom of the Henry Hudson Hotel.

All papers and discussions were presented as listed in the Official Program, with the exception of the discussion of the paper by Dr. George Cooper Jr. Dr. McLemore Birdsong of Charlottesville, Va., was scheduled to discuss the paper, but he was ill and could not attend the meeting.

At the business meeting on Wednesday, June 5, the following officers were elected: Chairman, Dr. Wendell G. Scott, St. Louis; Vice-Chairman, Dr. William W. Bryan, Atlanta, Ga., and Representative to the Scientific Exhibit, Dr. Richard H. Chamberlain, Philadelphia, for the ensuing year; Secretary, Dr. Traian Leucutia, Detroit, for a three-year term; Delegate, Dr. Eugene P. Pendergrass, Philadelphia; and Alternate Delegate, Dr. Earl R. Miller, San Francisco, for a two-year term.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

The Section on Surgery, General and Abdominal, held its meetings on Tuesday, Wednesday, and Thursday afternoon, June 4, 5, and 6, in the Coliseum. The papers and discussions were presented as listed in the Official Program, with the exception of the paper by Dr. Ernest E. Arnheim, New York. Unfortunately, he was in an automobile accident enroute to the meeting.

At the business meeting on Wednesday, the following officers were elected: Chairman, Dr. Frank L. Gerbode, San Francisco; Vice-Chairman, Dr. Charles G. Child III, Boston; Secretary, Dr. Gustaf E. Lindskog, New Haven, Conn.; Delegate, Dr. Grover C. Penberthy, Detroit; Representative to the Scientific Exhibit, Dr. John H. Mulholland, New York, all for the ensuing year. Dr. Robert M. Zollinger, Columbus, Ohio, was elected to membership on the American Board of Surgery, and Dr. Robert R. Shaw, Dallas, Texas, to membership on the American Board of Thoracic Surgery, for six-year terms.

SECTION ON UROLOGY

The Section on Urology met on Wednesday, Thursday, and Friday morning, June 5, 6, and 7, in the Colonnades Room of the Essex House, the session on Friday being a joint meeting with the Section on General Practice. All of the papers and discussions were presented as listed in the Official Program.

The John H. Morrissey award was presented to Drs. Sam G. Jameson, James O. Cooper, and J. Schuler McKinney, El Dorado, Ark., for their exhibit on "Pediatric Urology."

At the business meeting on Thursday, the Section voted to establish the position of Assistant Secretary and Assistant Representative to the Scientific Exhibit. The following officers were elected: Chairman, Dr. Roger W. Barnes, Los Angeles, Vice-

Chairman, Dr. Dean Parker, Seattle; Secretary, Dr. Thomas A. Morrissey, New York; Assistant Secretary, Dr. Robert Lich, Louisville, Ky., for the ensuing year; Delegate, Dr. Jay J. Crane, Los Angeles; Alternate Delegate, Dr. Earl E. Ewert, Boston; and Representative to the Scientific Exhibit, Dr. Milton M. Coplan, Miami, Fla., for two years, and Dr. E. F. Poutasse, Cleveland, as Assistant Representative to the Scientific Exhibit for the ensuing year.

SCOUTS JOIN IN WAR ON POISONINGS

Educating the public on the need for preventing accidental poisonings can be a responsibility shared by physicians, hospitals, industry, and local citizens. In recent months, countless poison control centers have sprung up throughout the country. A good sign in the prevention of poisonings is the fact that persons other than physicians have become interested in promoting these projects.

To publicize the educational function of its newly opened poison information center, the Los Angeles Childrens Hospital teamed up with Boy Scouts from this area and the Union Oil Company of California in presenting an exhibit at the annual Scout-o-Rama held on June 8, in the Los Angeles Memorial Coliseum. Staffed by Mrs. Claire Barton, a registered nurse in charge of the center, and Scout Troop number 86, the exhibit stressed three important messages: prevention, recognition of poisonous substances, and instructions on what to do when poison has been orally ingested. A pamphlet also was distributed to 6,500 persons emphasizing the common household poisons, adequate prevention, and the importance of contacting a physician before using an antidote. Nearly 75,000 parents and friends of Scouts attended the Scout-o-Rama.

Pointing out the danger of poisoning from common household products, such as fingernail polish, aspirin, and perfumes, are members of Troop 86 of the Los Angeles Boy Scouts at an exhibit on poison information center, during Scout-o-Rama which took place on June 8, at the Los Angeles Memorial Coliseum.

This program is in line with a recent stepped-up activity of the A. M. A. Committee on Toxicology, which has been investigating various means of improving public education on chemical safety. The Committee's exhibit on accidental poisonings is being shown at a number of state and county health fairs. Also available from the Association is a radio transcription on accidental poisonings for use over local radio stations.

A. M. A. ACTS TO COMBAT INFLUENZA EPIDEMIC

The American Medical Association has launched a nationwide preparedness program to combat a possible outbreak of Asiatic influenza in the United States. Working closely with Surgeon General Leroy E. Burney and the U. S. Public Health Service in Washington, D. C., the A. M. A. has approved a plan which will alert the nation's practicing physicians to the dangers of a possible flu outbreak.

"The epidemic may never strike in this country," reports Dr. David B. Allman, Atlantic City, N. J., A. M. A. President, "but the American Medical Association is anxious to have practicing physicians mobilized and alerted in case an outbreak does occur. Thousands of persons have been stricken with the disease in the Far East during the last few weeks and it is only good medicine to deal in probabilities now when we have the time. In that way, the American people will be best served from a medical standpoint." Dr. Allman stresses the fact that there is no immediate cause for alarm.

The A. M. A. Board of Trustees has authorized a special A. M. A. Committee on Influenza to handle the project. Chairman of the Committee is Dr. Harold C. Lueth, of Evanston, Ill., who has been serving for some time as Chairman of the A. M. A. Committee on Civil Defense. The Committee on Influenza plans to "Inform all physicians, through state and county medical societies, on how to deal with any Asiatic influenza epidemic; urge state and county medical societies to prepare and develop stand-by programs and plans to cope with any epidemic should it occur; formulate plans at the national level to utilize all medical personnel, regardless of type of practice, in time of an influenza emergency, and coordinate state and local programs with public health agencies and health departments."

The A. M. A. and the U. S. Public Health Service plan to carry on a cooperative public educational program with the help of newspapers and television and radio stations. The public will be given information about the particular virus—type A Far East strain—which causes the disease and how best to treat it when it strikes. The influenza caused by the new virus has been relatively mild, marked by a three-to-four-day period of fever and other typical symptoms of influenza. Several pharmaceutical manufacturers are now producing a vaccine to combat the Far East strain. No verified deaths from the disease have been reported in the United States but it is estimated that the attack rate would run between 15 and 20% of the population of any city where the disease reached epidemic proportions.

Postgraduate Courses for Physicians

Compiled by the Council on Medical Education and Hospitals for the Period Sept. 1, 1957, to Aug. 31, 1958

The data in the following list of postgraduate courses have been compiled by the staff under the supervision of Dr. Glen R. Shepherd, Assistant Secretary of the Council on Medical Education and Hospitals, with the clerical assistance of Miss Eileen O'Brien. The Council desires to express appreciation to the officers of the medical schools, hospitals, and medical societies who have cooperated in furnishing the information essential to the preparation of this report.

Edward L. Turner, M.D., Secretary
Council on Medical Education and Hospitals

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Cardiovascular Disease	1780	Geriatrics	1795	Ophthalmology and Otolaryngology	1808	Pulmonary Disease	1817
Clinical Pathology	1783	Gynecology	1795	Orthopedic Surgery	1808	Radiology	1819
Dermatology	1784	Hematology	1796	Otolaryngology	1809	Surgery	1822
Electrocardiography	1785	Internal Medicine	1797	Pathology	1810	Urology	1825
Electroencephalography	1788	Malignant Disease	1802				

INTRODUCTION

The third annual listing of postgraduate courses for physicians appears in the following pages of THE JOURNAL. This listing is for the period Sept. 1, 1957, to Aug. 31, 1958. The annual lists replace the semiannual lists that appeared previously.

Postgraduate medical education courses consist of planned activities for doctors of medicine intended to refresh practicing physicians in the various aspects of their basic medical education, to provide information on new developments in medicine, and to stimulate further educational efforts by the participants. Such courses are not designed to provide the lengthy intensive education required for specialist training and thus they may not lead either to credit toward graduate degrees or to specialty board certification. These are in the field of graduate medical education and usually consist of residency training or fellowships. Postgraduate courses are shorter than graduate education programs.

The Council on Medical Education and Hospitals has studied the field of postgraduate medical education for several years. For more than a year, its *ad hoc* Advisory Committee on Postgraduate Medical Education has studied ways in which the Council can be of greatest assistance in the further development of this part of medical education. As a first step in such a course of action recommended by the Advisory Committee and endorsed by the Council, the House of Delegates of the American Medical Association adopted in June, 1957, a document entitled "A Guide Regarding Objectives and Basic Principles of Postgraduate Medical Education Programs." It should be of interest to all who are actively interested in this field. A copy may be obtained on request to the Council on Medical Education and Hospitals, American Medical Association, 535 N. Dearborn St., Chicago 10.

This list of postgraduate courses was prepared from the unappraised and unevaluated replies to Council questionnaires by American medical schools, the hospitals having approved internship and residency training programs, and the various national, state, and specialty medical societies. This list is printed simply to provide for those physicians seeking postgraduate courses a point of departure through which further information can be obtained by writing to the institution or organization listed under Location. Such inquiries should be made before traveling to any course listed, because dates, time arrangements, and fees are subject to change. Courses for which there is insufficient registration may be canceled. Such inquiry of the sponsor is especially urged about courses scheduled for 1958, on which final information may not have been available to the sponsor at the time this list was prepared.

Though the educational values of medical society meetings and conventions as well as hospital staff and departmental meetings can be very real and worthwhile, such meetings are not usually here listed as postgraduate courses. Lists of society meetings are to be found monthly elsewhere in THE JOURNAL.

Many of the courses listed have co-sponsors to whom specific credit cannot be given because of space limitations. It is expected that the institution or organization sponsoring the course has provided such co-sponsor recognition to its registrants, for such organizations as the American and state heart associations, the American and state cancer societies, the National Foundation for Infantile Paralysis and its state chapters, the academies of general practice, other medical societies, and the various state boards of health are active and important in the field of postgraduate medical education.

In the following list under each category, the order of arrangement of the courses is alphabetically first by states, second by cities within states, third by the institutions and organizations within the cities, and last by date of course where several are offered by the same institution or organization.

Although the list may indicate that a course is designed primarily for specialists in that category, many such courses are open to any physician, so specific inquiry should be made of the institution listed.

One of the categories in this list has a special use in addition to its usual denotation. In the General Practice category are listed those courses having subjects embracing several fields, such as a course on the management of mass casualties or a course on both pediatrics and obstetrics.

KEY

Designed
G—Primarily for physicians in general practice and part-time specialty practice
S—Primarily for physicians in full-time specialty practice
B—For both of above

Type
A—Time by arrangement
BC—Brief course, less than five days regardless of hours per day
BCI—Brief course intermittent
SC—Short course, five or more days
SCI—Short course intermittent
CC—Circuit course (same course given at different locations)
MT—Medical traineeship*
HS(TV)—Home study by television
HS(R)—Home study by radio
HS(AV)—Home study by audiovisual kit
HS(C)—Home study by correspondence or assigned reading
O—Other

Time Arrangement
C—Continuous or concentrated (e.g., as every day for five days)
I—Intermittent (e.g., every Thursday for six weeks)

Methods of Instruction
AV—Audiovisual aids (movies, slides, models)
Cad—Cadaver demonstration or dissection
Dem—Demonstration other than of patients
EPP—Enrollee performs procedure
O—Open questions
Lab—Laboratory work
Lec—Lecture
LC—Live clinic
Pan—Panel
Pt. Dem.—Patient demonstration
Sem—Seminar
Sur—Operative surgery
TV—Television
WR—Ward rounds
MT—Medical traineeship*

* Medical traineeship is a residency-type experience in hospital, clinic, or school with participation in residents' conferences and ward rounds but usually without patient responsibility. This specially arranged experience usually lasts from two weeks to less than a year. Neither housing nor formal credit is provided. Traineeships usually do not involve night or emergency room duty.

ALLERGY
(See also Pediatrics)

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Allergy and Related Conditions	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O, EPP	50	10/ 2/57 3/19/58	12/ 4/57	I; 10 sessions 5 hr. weekly, Wednesdays	125
Personal Course in Allergy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, EPP	140	1st Monday of each mo.	Saturday of 4th wk.	C; 24 days	200
Personal Course in Allergy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	500	Arranged		C; 6 mo. full time	500
Allergy	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Room 1610 Ann Arbor, Mich.	B	SC	Pt. Dem, LC, Lec, AV	30	4/28/58	5/ 2/58	C; 5 days	50
Allergy Conference	University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	BC	Sem, Lec, Pan, O, AV	12	5/ 8/58	5/ 9/58	C; 2 days	10 per day
Medicine PM68	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	LC, Lec	26	9/12/57	12/19/57	I; 13 sessions 2 hr. weekly, Thursdays	50
Allergy Fundamentals	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SCI	LC, WR, Sem, Lec	24	Arranged		I; 8 sessions 3 hr. weekly, Tuesdays	50
Allergy	New York Polyclinic Hospital 345 W. 50th St., New York	G	SCI	Lab, Pt. Dem, LC, Lec	16	Arranged		I; 8 sessions 2 hr. twice weekly, Mondays, Fridays	50
546-A. Allergy	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab, Pt. Dem, Lec	105	10/14/57	11/ 1/57	C; 15 days	250
547-A. Refresher Course in Allergic Conditions	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Pt. Dem, Lec	21	3/24/58	3/26/58	C; 3 days	55
545-A. Allergy	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, Lec	14	4/11/58	5/23/58	I; 7 sessions 2 hr. weekly, Fridays	45
Modern Concepts and Management of Allergic Diseases	Roosevelt Hospital The Institute of Allergy 428 W. 59th St., New York 19	G	SC	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, EPP	80	5/12/58	5/23/58	C; 10 days	175
Clinical Allergy	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Lec, AV	18	9/26/57	1/23/58	I; 18 sessions 1 hr. weekly, Thursdays	20
American Academy of Allergy Postgraduate Course	The American Academy of Allergy 208 E. Wisconsin Ave., Milwaukee; course at The Bellevue Stratford Hotel Philadelphia	B	BC	Sem, Lec, Pan, O, AV, TV	Unknown	2/ 1/58	2/ 2/58	C; 2 days	Unknown
Clinical Allergy	United States Veterans Hospital Oakland University Dr., Pittsburgh	G	SC	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, EPP	40	4/ 7/58	4/12/58	C; 5½ days	50
Allergy	Albert Einstein Medical Center, No. Division,	G	SCI	Pt. Dem, LC, Sem, Pan	36	10/24/57	1/30/58	I; 12 sessions 3 hr.weekly,	60

Clinical Allergy	United States Veterans Hospital Oakland University Dr., Pittsburgh	G	SC	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, EPP	40	4/ 7/58	4/12/58	C; 5½ days	50
Allergy	Albert Einstein Medical Center, No. Division, York & Tabor Rd., Philadelphia	G	SCI	Pt. Dem, LC, Sem, Pan	36	10/24/57	1/30/58	I; 12 sessions 3 hr.weekly, Thursdays	60
ANATOMY									
Surgical Anatomy	University of California Medical Center Los Angeles 24	G	SCI	Lab, Lec, AV, EPP	20	9/23/57	11/25/57	I; 10 sessions 2 hr. weekly, Mondays	75
Surgical Anatomy—Dissection, Demonstration and Lectures	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G	SCI	Lab, Cad, Sem, Lec	297	9/30/57	6/ 4/58	I; 66 sessions 5 hr. weekly, Mondays 4 hr. weekly, Wednesdays	250
Surgical Anatomy—Dissection, Demonstration and Lectures on Upper and Lower Extremities	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G	SCI	Lab, Lec, Pan	117	9/30/57	1/ 8/58	I; 26 sessions 5 hr. weekly, Mondays 4 hr. weekly, Wednesdays	125
Surgical—Anatomy—Demonstration and Lectures	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G	SCI	Lec, Pan, Dem	74	10/ 2/57	6/ 4/58	I; 37 sessions 2 hr. weekly, Wednesdays	100
Surgical Anatomy—Demonstration and Lectures on Upper and Lower Extremities	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G	SCI	Dem, Lec, Pan	26	10/ 2/57	1/ 8/58	I; 13 sessions 2 hr. weekly, Wednesdays	50
Surgical Anatomy—Dissection, Demonstration, and Lectures on Thorax, Abdomen, and Pelvis	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G	SCI	Lab, Cad, Lec, Pan, Dem	117	1/13/58	4/16/58	I; 26 sessions 5 hr. weekly, Mondays 4 hr. weekly, Wednesdays	125
Surgical Anatomy—Demonstration and Lectures on Thorax, Abdomen and Pelvis	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G	SCI	Dem, Lec, Pan	26	1/15/58	4/16/58	I; 13 sessions 2 hr. weekly, Wednesdays	50
Surgical Anatomy—Dissection, Demonstration, and Lectures on Head and Neck	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G	SCI	Lab, Cad, Lec, Pan, Dem	63	4/21/58	6/ 4/58	I; 14 sessions 5 hr. weekly, Mondays 4 hr. weekly, Wednesdays	75
Surgical Anatomy—Demonstration and Lectures on Head and Neck	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G	SCI	Dem, Lec, Pan	22	4/23/58	6/ 4/58	I; 11 sessions 2 hr. weekly, Wednesdays (Mondays, 5/12 through 6/2/58)	35
Gross and Applied Anatomy	San Diego County General Hospital North End of Front St., San Diego 3, Calif.	S	SCI	Lab, Lec, O, AV	32	9/57	12/57	I; 16 sessions 2 hr. weekly, Wednesdays	Nil
Surgical Anatomy	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	SC	Lab, Lec	Unknown	3/58	6/58	C; 3 mo.	Unknown
Anatomy, 201, Special Dissections in Anatomy for Surgeons	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	Surgery and Surgical specialties	SCI	Lab	Unknown	Arranged (preferably summer)		Arranged	Arranged
Anatomy 202, Demonstrations in Anatomy for Surgeons	Assistant Dean of Post-graduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	Surgery and Surgery specialties	SCI	Lab, AV	about 50	9/57	5/58	I; 30 sessions 1 evening weekly	175
Surgical Anatomy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, Sur, Lec, O	90	9/19/57 3/20/58	11/21/57	I; 10 sessions 2 hr. weekly, Thursdays	125
Surgical Anatomy on the Cadaver and Clinical Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	100	9/30/57 3/10/58 6/16/58	10/12/57	C; 13 days	150
Dissection of Lower Extremity for Orthopedic Surgeons	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	S	SCI	Lab, Lec, O, AV, EPP	56	Arranged in winter		I; 14 sessions 4 hr. weekly, Thursdays	75
Dissection of Spine for Orthopedic Surgeons	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	S	SCI	Lab, Lec, O, AV, EPP	56	Arranged in spring		I; 14 sessions 4 hr. weekly, Thursdays	75
Dissection of Upper Extremity for Orthopedic Surgeons	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	S	SCI	Lab, Lec, O, AV, EPP	56	Arranged in fall		I; 14 sessions 4 hr. weekly, Thursdays	75
Dissection of Male Abdomino-pelvis	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	S	SCI in G.U. and Surg.	Lab, Lec, O, AV, EPP	60	Arranged in fall		I; 15 sessions 4 hr. twice weekly, Wednesdays and Thursdays	125

Key will be found on page 1774.

ANATOMY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Dissection of Female Abdomino-pelvis	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	S in Ob. and Surg.	SCI	Lab, Lec, O, AV, EPP	60	Arranged		I; 15 sessions 4 hr. twice weekly, Mondays and Tuesdays	125
Embryology for Otolaryngologists	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	S in Otolaryngology	BCI	Lab, Lec, O, AV	16	Arranged in fall		I; 4 sessions 4 hr. weekly, Mondays	25
Anatomy of Head and Neck as Applied to EENT	University of Maryland School of Medicine 522 W. Lombard St., Baltimore 1	S	SCI	Lab, Lec, Pan	144	10/ 1/57	2/28/58	I; 36 sessions 4 hr. weekly, Mondays, Thursdays	150
Clinical Anatomy	University of Maryland School of Medicine 522 W. Lombard St., Baltimore 1	S	SCI	Lab, Lec	90	1/28/58	5/31/58	I; 30 sessions 3 hr. weekly, Mondays, Wednesdays	150
General Anatomy	University of Maryland School of Medicine 522 W. Lombard St., Baltimore 1	S	SC or SCI by arrangement	Lab, Lec, Pan	Arranged	Arranged		Arranged	Varies
Surgical Anatomy	Harvard Medical School 25 Shattuck St., Boston	S in Surgery	SC	Lab, Lec	110	3/ 3/58	4/25/58	C; 40 days	200
Dissection of Upper Extremity, Head and Neck Correlated with Clinical Surgery	Albany Medical College 47 New Scotland Ave., Albany, N. Y.	G	SCI	Lab, Lec, EPP	56	9/17/57	1/14/58	I; 16 sessions 3½ hr. weekly, Tuesdays	300
Dissection of Thorax, Abdomen and Lower Extremity Correlated with Clinical Surgery	Albany Medical College 47 New Scotland Ave., Albany, N. Y.	G	SCI	Lab, Cad, Lec, EPP	59½	1/21/58	5/13/58	I; 17 sessions 3½ hr. weekly, Tuesdays	300
Anatomy of the Abdomen	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lab	100	Arranged		I; Arranged	150
Applied Anatomy of the Urogenital System	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lab, Lec	130	Arranged		I; Arranged	300
Anatomy for the Orthopedic Surgeon	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lab	100	Arranged		I; Arranged	150
Anatomy of the Thorax	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lab	100	Arranged		I; Arranged	150
Applied Anatomy for the General Surgeon	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lab, Lec	250	Arranged		I; Arranged	375
Applied Anatomy for the Otolaryngologist	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lab, Lec	150	Arranged		I; Arranged	275
Applied Anatomy for the Anesthetist	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lab, Lec	125	Arranged		I; Arranged	275
Anatomy—Surgical (a)	New York Polyclinic Hospital 345 W. 50th St., New York	G	SCI	S, Sem, Lec, O, AV, Cad	18	Arranged on request		I; 6 sessions 3 hr. weekly, Mondays, Wednesdays, Fridays	300
Anatomy—Surgical (b) or (c)	New York Polyclinic Hospital 345 W. 50th St., New York	G	SCI	S, Sem, Lec, O, AV, EPP	12	Arranged		Arranged; 6 sessions	200 (b) 300 (c)
Anatomy—Surgical (d)	New York Polyclinic Hospital 345 W. 50th St., New York	G	BCI	Lab, Sur, Sem, Lec, O, AV, EPP	6	Arranged		I; 3 days Arranged; 2 hr. thrice weekly, Mondays, Wednesdays, Fridays	300
411-A Surgical Anatomy of the Head and Neck	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, EPP	144	9/23/57	12/13/57	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
413-A Surgical Anatomy of the Abdomen	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, EPP	144	9/23/57	12/13/57	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
412-A Surgical Anatomy of	New York University Post-Graduate Medical	G	SCI	Lab, EPP	144	9/23/57	12/13/57	I; 36 sessions 4 hr. thrice	100

413-A Surgical Anatomy of the Abdomen	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, EPP	144	9/23/57	12/13/57	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
412-A Surgical Anatomy of the Thorax and its Viscera	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, EPP	144	9/23/57	12/13/57	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
416-A Surgical Anatomy of the Musculoskeletal System	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, EPP	144	3/24/58	6/13/58	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
414-A Surgical Anatomy of the Female Pelvis	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, EPP	144	3/24/58	6/13/58	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
415-A Surgical Anatomy of the Genitourinary System	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, EPP	144	3/24/58	6/13/58	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
Anatomy	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	Unknown	Arranged	Lab, Dem, EPP	Arranged	Arranged		Arranged	Arranged

ANESTHESIOLOGY
(See also Anatomy)

Anesthesiology in General Practice	Lloyd Noland Hospital Fairfield, Ala.	G	MT or (SCI)	Pt. Dem, LC, WR, Sur, Lec, Pan, O, AV, EPP	Unknown	Arranged	2 to 6 wk. later	Full time or (6 hr. each Thursday for 1 yr.)	Varies according to time arrangement
Inhalation and Endotracheal Anesthesia	St. Mary's Hospital West St. Mary's Rd., Tucson, Ariz.	G	SC	Pt. Dem, WR, Sem, EPP	Unknown	Arranged		Arranged	Nil
Anesthesiology	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33; course at White Memorial Hospital, Los Angeles 33	G	SC	LC, Sem, Lec	765	Arranged every 6 mo.		C; 120 days	350
Anesthesia	University of California at Los Angeles Medical Center Los Angeles 24	G	BC	Lec, Pan, O, AV	15	Summer/58		C; 2½ days	Unknown
Postgraduate Course in Clinical Anesthesiology	White Memorial Hospital 1720 Brooklyn Ave., Los Angeles	G	MT	Pt. Dem, WR, Sem, O	Unknown	Arranged	6 mo. later	Arranged	Unknown
Clinical Anesthesiology	University of Colorado Medical Center 4200 E. Ninth Ave., Denver 20	G	SC	Pt. Dem, Sur, EPP	Arranged	Arranged		Arranged	125 per quarter
General Anesthesia	St. Francis Hospital 114 Woodland St., Hartford 5, Conn.	G	SCI	Pt. Dem, LC, Sur, Lec, O, AV	Depends on candidate	9/16/57 1/ 1/58 3/ 1/58	Depends on candidate	I; Arranged	Unknown
Course I—Regional Anesthesia	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, Sur, Lec, O, AV, EPP	140	1st Monday of each mo.	4 wk. later	C; 20 days	300
Course V—Inhalation and Endotracheal Anesthesia	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, Sur, Lec, O, AV, EPP	140	1st Monday of each mo.	4 wk. later	C; 20 days	300
Anesthesiology	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	SCI	Sem, Lec, Pan, AV, O	175	9/ 6/57	5/23/58	I; 35 sessions 5 hr. weekly, Fridays	Arranged
Anesthesiology	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	MT	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, EPP	80, 160, or 230	Each Monday	Varies	Varies	100, 150 or 200
Anesthesiology—Clinical Instruction	Indiana University Medical Center 1100 W. Michigan St., Indianapolis	G	SC or MT	Pt. Dem, LC, WR, Sur, Sem, Lec	Arranged	Arranged		Arranged	Nil
Anesthesia	State University of Iowa College of Medicine University Hospitals, Iowa City	G	BC	Lec, Pan, O, AV	14-16	3/18/58	3/19/58	C; 2 days	30
Anesthesiology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	BC	Pt. Dem, Lec, Pan, O, AV, TV	21	4/14/58	4/16/58	C; 3 days	35
Clinical Traineeship in Anesthesiology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	MT	LC, Lec, Pan, O, AV, TV, EPP	Varies	Arranged	2 wks. later min.	6-8 hr. days weekly for at least 2 wk.	50 per mo. residents of Kansas 100 per mo. out of state
Anesthesiology	University of Louisville School of Medicine 101 E. Chestnut St., Louisville, Ky.	G	SC	LC, EPP	200-600	Arranged		C; 30-90	Nil
Postgraduate Lectures in Anesthesiology—Basic Science and Clinical	Maine Medical Center 22 Bramhall St., Portland, Me.	G	SCI	Sem, Lec, O, AV	15	10/18/57	5/58	I; 15 sessions 1 hr. every other Friday	Nil

Key will be found on page 1774.

ANESTHESIOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Anesthesiology	Eastern Maine General Hospital 489 State St., Bangor, Me.	G	SC or SCI	Pt. Dem, LC, WR, Sur, Sem, Lec, Pan, O, AV, EPP	Arranged	Arranged		Arranged	Nil
Postgraduate Anesthesiology	St. Vincent Hospital 25 Winthrop St., Worcester, Mass	G	MT	Pt. Dem, WR, Lec, O, AV, EPP	44 weekly	Arranged		Arranged	Nil
Cardiac Resuscitation, Prevention and Treatment of Cardiac Arrest	St. Michael's Hospital 306 High St., Newark, N. J.	G+ dentists, nurse anesthetists	BC	Lab, Sur, Lec, Pan, O, AV	7	10/16/57 repeated each mo. until 6/21/58	10/16/57	C; 1 day	25
Postgraduate Refresher Course	Albany Hospital New Scotland Ave., Albany, N. Y.	G	SC	Pt. Dem, Sem, EPP	960	Arranged		C; 120 days	400
Anesthesia	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	SC	Pt. Dem, LC, WR, Sur, Sem, Lec, Pan, O, AV, EPP	39	3/24/58	3/29/58	C; 6 days	75
Anesthesiology	University of Buffalo School of Medicine 3435 Main St., Buffalo 14	G	SC	Pt. Dem, LC, Lec, Pan, O, EPP	37½	4/58	4/58	C; 5 days	75
Clinical Anesthesiology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. & 106th St., New York	S	SC	Pt. Dem, Sem, Lec	Unknown	Arranged		C; 3 mo. full time	200
Applied Anesthesiology	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, WR, Lec, AV	480	4/ 1/58	6/30/58	C; 72 days	300
511-A. Anesthesiology (For Specialists)	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	LC	70	Mondays, Sept. through June		C; 10 days	150
512-A. Regional Anesthesiology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab, LC, Lec, EPP, Cad	35	9/ 9/57 1/13/58 4/14/58	9/13/57	C; 5 days	125
510-A. Anesthesiology: Endotracheal and Related Methods	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	LC, Lec	35	9/30/57 1/ 6/58 3/24/58	10/ 4/57	C; 5 days	100
515-A. Electrocardiography for Anesthesiologists	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, Lec	35	10/ 7/57	10/11/57	C; 5 days	85
Anesthesia for Part-Time Anesthetists	New York State Society of Anesthesiologists 131 W. 11th St., New York 11; course at various hospitals throughout New York State	G	SC	Pt. Dem, LC, WR, Lec, O, AV	Varies	Varies		C; Varies	Nil
Refresher Course in Anesthesia	Duke University Hospital Durham, N. C.	G	BC	Pt. Dem, LC, Sur, Sem, Lec, Pan	20	3/20/58	3/22/58	C; 3 days	25
Refresher Course in Anesthesia	Christ Hospital Cincinnati	G	SC or MT	Pt. Dem, LC, WR, Sem, Lec, O, EPP	Arranged	Arranged		Arranged	Nil
Obstetrical Anesthesia	Mrs. Adella Gilman, Department of Anesthesiology Western Reserve University Hospitals 2065 Adelbert Rd., Cleveland 6	G	MT including patient responsibility and night duty	Pt. Dem, Sem, Lec, O, AV, EPP	480	1/ 1/58 4/ 1/58	3/31/58	90 days	150
Anesthesiology	Cleveland Clinic 2020 E. 93rd St., Cleveland	B	O	Observation	Unknown	Arranged		Arranged	Nil
Anesthesiology	Ohio State University Columbus, Ohio	G	SC or MT	Lab, Pt. Dem, Sur, Lec, EPP	28 or 6 mo.	Fall, Spring As requested	4 days 6 mo. later	4 days for SC Full time 6 mo. for MT	Nil Nil
Clinical Anesthesiology	St. Anthony Hospital Hawthorne and Taylor Ave., Columbus, Ohio	G	SC, SCI, or MT	Pt. Dem, WR, Sur, Sem, Lec, AV	Arranged	Arranged		12 to 24 sessions 2 hr. weekly, Tuesdays	50
Refresher Course in Anesthesiology	American Society of Anesthesiologists, Inc. Committee on Postgraduate Education, Chairman 215 Professional Bldg., Springfield, Mo.; course at various hospitals in the City of Toledo, Ohio	G	SC	Pt. Dem, Sur, Sem, O, EPP	Open	As requested		Open	Nil
Refresher Course in General Anesthesia	McKesson Anesthesia Associates 2228 Ashland Ave., Toledo 10, Ohio; course at various Toledo hospitals	G	SC	Pt. Dem, LC, WR, Sur, Lec, Pan, O		Arranged		C; 4 wk.	250
Anesthesia	Joseph M. White, Jr., Chairman Department of Anesthesiology University Hospital 800 N.E. 13th, Oklahoma City	G	SC	Sur, Sem, O	Length of time individual has available	Arranged		Arranged	Nil

Recent Advances in the Physiological Aspects of	Graduate School of Medicine University of Pennsylvania	B	BC	Sem, Lec, Pan, O, AV	Unknown	2/10/58	2/12/58	C; 3 days	75
					17	2/10/58	2/12/58	C; 3 days	75

	Department of Anesthesiology University Hospital 800 N.E. 13th, Oklahoma City			Sur, Sem, O	Length of time individual has available	Arranged		Arranged	Nil
Recent Advances in the Physiological Aspects of Anesthesia	Graduate School of Medicine University of Pennsylvania Philadelphia	B	BC	Sem, Lec, Pan, O, AV	Unknown	2/10/58	2/12/58	C; 3 days	75
Recent Advances in Pharmacologic Aspects of Anesthesia	University of Pennsylvania Graduate School of Medicine 3660 Spruce St., Philadelphia	G	BC	Lec, O, AV	15	2/10/58	2/12/58	C; 3 days	75
Anesthesiology	University of Pittsburgh School of Medicine 3630 Terrace St., Pittsburgh 13	S	SC	Sem, Lec, Pan, AV	Unknown	6/10/58	6/14/58	C; 5 days	25
Anesthesia for the General Practitioner and Part-Time Anesthesiologist	Medical College of South Carolina Hospital 55 Doughty St., Charleston, S. C.	G	SC	Pt. Dem, LC, WR, Sem, Lec, O, EPP	Minimum of 50	1/ 1/58	Arranged	C; minimum of 7 days	Unknown
Postgraduate Refresher Course in Anesthesiology	University of Texas Postgraduate School of Medicine 213 W. Avenue G., Temple, Tex.; course at Scott and White Memorial Hospitals Scott, Sherwood, and Brindley Foundation, Temple, Tex.	G	SC	Pt. Dem, WR, Sur, Sem, Lec, EPP	176	Monthly through May		C; 24 days	25
Short Course or Traineeship	University of Utah Division of Postgraduate Medical Education 175 E. 21st St., Salt Lake City; course at affiliated hospital	G	SC or MT	Pt. Dem, LC, Sur, Sem, Lec, Pan, O, AV	44 Arranged	2/58 Arranged		Continuous 6 to 8 days One day wk. for 8 wk. Full time 1 to several mo. as arranged	50 50 per mo.
Postgraduate Course in Anesthesiology	University of Virginia Hospital Charlottesville, Va.	G	BC	Pt. Dem, Sem, Lec, Pan, O, AV	1 day	7/13/58	7/13/58	C; 1 day	Nil
Traineeship	Medical College of Virginia 1200 E. Broad St., Richmond, Va.	G	MT	Pt. Dem, WR, Sem, Lec, EPP	Arranged	Arranged		Arranged	Nil
Regional and General Anesthesia for the General Practitioner	Tacoma General Hospital 315 South K St., Tacoma 5, Wash.	G	SC	Pt. Dem, LC, WR, Sur, Lec, AV	360	First of any mo.	3 mo. later	C; 60 days	100
Anesthesiology	Lucien E. Morris, M.D. University of Washington School of Medicine Seattle; course at University of Washington and affiliated hospitals	B	MT	Lab, Pt. Dem, Sur, Sem, EPP		Arranged		Arranged	Unknown
				BASIC SCIENCES					
Photomicrography	University of California Medical Center Los Angeles 24	G	SCI	Lab, Lec, AV	12	11/ 4/57	12/ 9/57	I; 6 sessions 2 hr. weekly, Mondays	30
820 Basic Science, Applied Physiology	San Diego County General Hospital North end of Front St., San Diego 3, Calif.	S	SCI	Lec, Pan, O, AV	16	3/58	4/58	I; 8 sessions 2 hr. weekly, Thursdays	Nil
Review of Neuroanatomy and Neurophysiology	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D. C.; course at Walter Reed Army Institute of Research, Walter Reed Army Medical Center, Washington, D. C.	S	SC	Lab, WR, Sem, Lec, O, AV	60	2/10/58	2/22/58	C; 10 days	Nil
Biochemical Background of Clinical Medicine—A Basic Course	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lec, O	20	9/18/57 3/19/58	11/21/57	I; 10 sessions 2 hr. weekly, Wednesdays	100
Histochemistry Techniques	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	SC	Lab, Lec, EPP	92	6/ 9/58	6/21/58	C; 12 days	125 75 for 1 wk.
Basic Sciences as they Apply to Medicine	University of Maryland School of Medicine 522 W. Lombard St., Baltimore 1	G	SCI	Lec	42	1/ 9/58	5/29/58	I; 21 sessions 2 hr. weekly, Wednesdays	50
Workshop on Clinical Chemistry—Cations	U.S. Naval Medical School National Naval Medical Center, Bethesda 14, Md.	S	BC	Lab, Sem, Lec, AV	16	9/27/57	9/28/57	C; 2 days	20
Basic Sciences and Their Clinical Application	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	Primarily for residents	MT	Lab, Pt. Dem, LC, WR, Lec, Pan, O, AV	Full time	9/30/57	6/ 6/58	9 mo.	500
Bacteriology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SC	Lab, Sem, Lec	240	Arranged		C; 60 days	100
Immunology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SC	Lab, Sem, Lec	120	Arranged		C; 30 days	50
60-A. Biochemistry and Physiology in Disease: Laboratory Diagnosis	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, O, AV	16	10/ 1/57	11/26/57	I; 8 sessions, 2 hr. weekly, Tuesdays	50
61-A. Clinical Physiology: The Application of Basic Physiology to Diagnostic and Therapeutic Problems	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, Pt. Dem, O, Dem	16	1/ 9/58	2/27/58	I; 8 sessions, 2 hr. weekly, Thursdays	50

Key will be found on page 1774.

BASIC SCIENCES—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Review Course in Organic Chemistry	Mount Sinai Hospital 1800 E. 105th St., Cleveland	G	SC	Lec	15	1/58		C; 15 days Arranged	None
Correlated Clinical Science Course	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	B	SC	Lec	217	9/24/57	5/16/58	C; 160 days	200

CARDIOVASCULAR DISEASE

(See also Radiology, Surgery, and Electrocardiography)

Recent Advances in the Diagnosis and Treatment of Surgical Heart Disease	City of Hope Medical Center 1500 E. Duarte Rd., Duarte, Cal.	G	SC	Pt. Dem, LC, Lec, Pan, O, AV	19½	3/26/58	3/28/58	C; 3 days	10 per day or 25 for entire course
Pathological Physiology of the Cardiovascular System	University of California School of Medicine Los Angeles 24	G	SCI	Sem, Lec, O, AV	20	10/ 7/57	12/ 9/57	I; 10 sessions 2 hr. weekly, Mondays	50
873—Cardiac Resuscitation	University of Southern California School of Medicine Postgraduate Division Medical Research Building 2025 Zonal Ave., Los Angeles 33	B	BC	LC, Lec, EPP	2	Repeated each week		C; 1 day	30 for practicing physicians; no fee for residents
Recent Advances in Treatment of Heart Disease	Monterey County Heart Association 1073 Cass St., Monterey, Cal.	G	BC	Pt. Dem, LC, Lec, Pan	12	12/ 4/57	12/ 5/57	C; 2 days	15
Symposium on Heart Disease	Orange County Heart Association P.O. Box 1704, Santa Ana, Calif. Course at hotel	G	BC	Lec, Pan, O	8-10	Spring 58		C; 1 day	10
Symposium on Cardiovascular Disease	Medical Extension, University of California Odd Fellows Hall, Santa Rosa, Cal.	G	BC	Lec	9	11/13/57	11/13/57	C; 1 day	12.50
Sixth Western Cardiac Conference	Office of Postgraduate Medical Education University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20; course at Colorado Heart Association, Denver 20	B	BC	Lec, Pan	24	9/ 5/57	9/ 7/57	C; 3 days	15
Fifth Biennial Cardiovascular Seminar	The Miami Heart Assoc. 2 S.E. 13th St., Miami, Fla.; course at Miami hotel	S	BC	Sem, Lec, Pan, O, AV	18	4/23/58	4/26/58	C; 4 days	20
Heart Seminar	Florida State Board of Health—Bureau of Special Health Services P.O. Box 210, Jacksonville, Fla.; course at hotel	G	BC	Sem, Lec, Pan, O, AV	15	10/57		C; 2 days	Nil
Seminar on Cardiovascular Diseases	Northeast Florida Heart Association Prudential Building 425 W. Duval St., Jacksonville, Fla.	B	BC	Pt. Dem, Lec, Pan, O, AV	15	2/20/58	2/22/58	C; 2½ days	10
Cardiology	Emory University School of Medicine, Postgraduate Division Emory University, Atlanta, Ga.; course at Grady Memorial Hospital Atlanta 3, Ga.	G	SC	Unknown	40	1/13/58	1/18/58	C; 5½ days	100
Ninth Annual Scientific Sessions	Georgia Heart Association, Inc. 1101 W. Peachtree St., N.E. Atlanta 9, Ga.; course at General Oglethorpe Hotel Savannah, Ga.	G	BC	Lec, Pan, O, AV	10	9/13/57	9/14/57	C; 2 days	None
Electrocardiography and Heart Disease	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	70	10/ 7/57 3/10/58 7/ 7/58	10/19/57	C; 11 days	150
Cardiovascular Disease	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	20	9/18/57	11/20/57	I; 10 sessions 2 hr. weekly, Wednesdays	100
Diagnosis of Congenital and Acquired Malformations of the Heart in Infants and Children; Roentgenology, Electrocardiography, Angiocardiography and Catheterization of the Heart and Great Vessels	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	25	11/11/57	11/23/57	C; 5 days	100
Cardiac Arrhythmias	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Lec, Pan, O, AV	16	9/23/57	9/24/57	C; 2 days	20
Radiology of the Heart	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	SCI	Lec, O, AV	5	1/ 2/58	1/30/58	I; 5 sessions 1 hr. weekly, Thursdays	25
Heart Symposium (7th Annual)	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Sem, Lec, Pan, AV	8	2/12/58	2/13/58	C; 2 days	Nil
Rheumatic Heart Disease, Arteriosclerotic Heart Disease, Congestive Failure	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Lec, Pan, O, AV	18-23	10/ 3/57	10/ 5/57	C; 3 days	Nil

Heart Symposium (7th Annual)	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Sem, Lec, Pan, AV	8	2/12/58	2/13/58	C; 2 days	Nil
Rheumatic Heart Disease, Arteriosclerotic Heart Disease, Congestive Failure	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Lec, Pan, O, AV	16	2/20/58	2/21/58	C; 2 days	25
Mid-West Cardiac Conference	State University of Iowa College of Medicine University Hospital, Iowa City	G	BC	Lec, Pan, O, AV	18-23	10/ 3/57	10/ 5/57	C; 3 days	Nil
Clinical Traineeship in Cardiovascular Disease	Un.versity of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	MT	Lab, Pt. Dem, LC, Sem, Lec, O, AV	Approx 120	2/ 1/58 3/ 1/58	2/28/58	Approx 30 days	200
The Heart: The Acute Coronary Occlusion	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	14	2/24/58	2/25/58	C; 2 days	30
Diseases of the Heart	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	SC	Pt. Dem, Lec, O	30	4/14/58	4/18/58	C; 5 days	50
Cardiology	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	B	SC	Pt. Dem, WR, Sem, Lec, Pan	40	12/ 2/57	12/ 6/57	C; 5 days	50
Latest Advances in Cardiology	American College of Physicians 4200 Pine St., Philadelphia 4; course at National Heart Institute, National Institutes of Health, Bethesda, Md.	S	SC	Lec, Pan, O, AV	35-40	Unknown		C; 5 days	30 A.C.P. members; 60 non-members
Cardiology 2	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Boston City Hospital, Boston	G	SCI	Pt. Dem, Lec	36	11/ 6/57	2/ 5/58	I; 12 sessions 3 hr. weekly, Wednesday mornings	75
Cardiovascular Diseases for General Physicians	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	BC	Lec, O	15	2/ 6/58	2/ 8/58	C; 3 days	30
Cardiovascular Seminar	The University of Mississippi Medical Center 2500 N. State St., Jackson, Miss.	B	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	20	4/ 2/58	4/ 5/58	C; 4 days	10
Electrocardiography and Heart Diseases	University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	BC	WR, Sem, Lec, Pan, O, AV	18	9/30/57	10/ 2/57	C; 3 days	10 per day
Recent Advances in Cardiology	St. Michael's Hospital 306 High St., Newark, N. J.	G	SCI	Lab, Pt. Dem, LC, Pan, O	16	9/25/57	4/16/58	I; 8 sessions 2 hr. mo., Wednesdays	25
New Medical and Surgical Approaches to Cardiovascular Disease	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	SCI	Pt. Dem, LC, Sem, O, TV	27	1/ 9/58	2/13/58	I; 6 sessions 4½ hr. weekly, Thursdays	12 a day or 60 for course
Clinical Cardiology	Albany Medical College Albany, N. Y.; course at Veterans Administration Hospital Albany, N. Y.	G	SC	Pt. Dem, LC, WR, Sem, Lec, O	40	Unknown		C; 5 days	60
Recent Advances in Cardiovascular Disease	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Pt. Dem, LC, Sem, Lec, Pan, O	21	12/ 4/57	12/ 6/57	C; 3 days	45
Basic Cardiology	Meadowbrook Hospital Carman Ave. and Bethpage Turnpike, Hempstead, N. Y.	G	SCI	Pt. Dem, WR, Sem, Lec	90	10/ 2/57	5/14/58	I; 30 sessions 3 hr. weekly, Wednesdays	100
Medicine PM64 Surgical Treatment of Heart Disease	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	LC, Sem, Lec	63	9/24/57 2/ 4/58	1/28/58	I; 18 sessions 3½ hr. weekly, Tuesdays	150
Medicine PM63 Cardiology III	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Sem, Lec, Pt. Dem, WR, Lab	63	9/24/57 2/ 4/58	1/28/58	I; 18 sessions 3½ hr. weekly, Tuesdays	150
Medicine PM60 Cardiology I	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Lab, Pt. Dem, LC, Lec, AV	90	10/ 3/57 2/ 6/58	1/30/58	I; 15 sessions 6 hr. weekly, Thursdays	150
Medicine PM62 Cardiology II	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Lab, Pt. Dem, LC, Lec	52½	10/ 3/57 2/ 6/58	1/30/58	I; 15 sessions 3½ hr. weekly, to be arranged	150
PM29 Medicine Clinical Cardiology	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SCI	Pt. Dem, LC, Lec	30	10/15/57 2/ 4/58	12/17/57	I; 10 sessions 2 hr. weekly, Tuesdays	60
PM31 Medicine Advances in Cardiovascular Disease	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SC	Pt. Dem, LC, Lec	30	1/27/58	2/ 7/58	C; 10 days	75
PM48 Medicine Heart Disease and Circulatory Dynamics	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SCI	LC, Lec	20	2/18/58	4/22/58	I; 10 sessions 2 hr. weekly, Tuesdays	50

Key will be found on page 1774.

CARDIOVASCULAR DISEASE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Cholesterol and Lipids in Human and Experimental Atherosclerosis	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y. course at Beth-El Hospital, Brooklyn, N. Y.	G	SCI	Lec, AV	12	10/57 4/58	12/57	I; 8 sessions 1½ hr. weekly, Tuesdays	20
Peripheral Vascular Diseases	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Coney Island Hospital, Brooklyn, N. Y.	G	SCI	Pt. Dem, Lec	10	10/57	12/57	I; 10 sessions 1 hr. weekly, Mondays	20
Peripheral Vascular Diseases	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Hospital, Brooklyn, N. Y.	G	SCI	LC, Lec	10	4/58	5/58	I; 10 sessions twice weekly, Mondays, Fridays	20
Clinical Cardiology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Beth-El Hospital, Brooklyn, N. Y.	G	SCI	LC, WR, Lec	18	4/58	5/58	I; 12 sessions 1½ hr. twice weekly, Wednesdays, Fridays	30
Cardiology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lab, Pt. Dem, Sem, Lec	60	Arranged		I; 20 sessions 3 hr. weekly, Wednesdays	150
5415-A. Modern Concepts in Etiology, Diagnosis and Treatment of Heart Diseases	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, Lec	35	1/ 6/58	1/10/58	C; 5 days	55
548-A. Modern Trends in Diagnosis and Treatment of Congenital Heart Disease	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Pt. Dem, Lec, AV	21	2/ 3/58	2/ 5/58	C; 3 days	55
5410-A. Cardiology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, Lec, AV	24	4/10/58	5/29/58	I; 8 sessions 3 hr. weekly, Thursdays	85
549-A. Cardiology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, Lec, AV	105	5/ 5/58	5/23/58	C; 15 days	250
Seminars on Heart Disease	St. Francis Hospital and Sanatorium Roslyn, N. Y.	G	SCI	Sem, Lec, O	8	9/57	5/58	I; 4 sessions 2 hr. mo. on first Thursday	Unknown
Postgraduate Course of Lectures in Cardiology with Salient Features Pertinent to Adult and Pediatric Cardiology	St. Francis Hospital and Sanatorium Roslyn, N. Y.	G	SC	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, TV	82	4/14/58	4/26/58	C; 12 days	Unknown
Postgraduate Course in Cardiovascular Diseases	Personal Health Division North Carolina State Board of Health Raleigh, N. C.; course at Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N. C.	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	20	10/ 3/57	10/ 5/57	C; 3 days	Nil
Seminar on Heart Disease	G. B. Hannah, M.D., Secy. Southwestern Ohio Society of General Physicians Sharon and Willow Aves., Glendale, Ohio; course at University of Cincinnati College of Medicine, Cincinnati	G	BC	Sem, Lec, Pan, O	4	1/19/58	1/19/58	C; 1 day	10
Postgraduate Course on Cardiac Arrest and Resuscitation	Mercy Hospital Madison Ave., Toledo, Ohio	B	BC	Lab, Sur, Lec, AV, EPP	4	Monthly, repeated twice each mo.		C; 1 day	10
Postgraduate Cardiology I	Hahnemann Medical College and Hospital 230 N. Broad St., Philadelphia	G	SCI	Pt. Dem, Lec, Pan, O, AV	90	10/ 4/57	5/30/58	I; 30 sessions 3 hr. weekly, Thursdays	150
Postgraduate Cardiology 2	Hahnemann Medical College and Hospital of Philadelphia 230 N. Broad St., Philadelphia	G	SCI	Pt. Dem, Lec, Pan, O, AV, EPP	45	10/57	5/58	I; 30 sessions, 1½ hr. weekly, Thursdays	150
Cardiac Arrhythmias	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	B	SC	Sem, Pan, O, AV	Unknown	Fall/57	Unknown	C; Unknown	75
Cardiac Arrhythmias	The American College of Physicians 4200 Pine St., Philadelphia 4; course at Philadelphia General Hospital, Philadelphia	S	BC	Lec, Pan, O, AV	21	11/ 1/57	11/ 3/57	C; 3 days	30 A.C.P. members; 60 non-members
Graphic Methods in Cardiovascular Diagnosis	Graduate School of Medicine University of Pennsylvania Philadelphia	B	SCI	Pt. Dem, Pan, AV	30	1/ 8/58	3/58	I; 10 sessions 3 hr. weekly, Wednesdays	75
Changing Attitudes in Coronary Heart Disease	Washington State Heart Association 3114 Arcade Bldg., Seattle; course at University of Washington School of Medicine, Seattle	G	BC	Lec, Pan, O	9	10/ 4/57	10/ 5/57	C; 2 days	Unknown

Coronary Heart Disease	3114 Arcade Bldg., Seattle; course at University of Washington School of Medicine, Seattle					10/ 4/57	10/ 5/57	C; 2 days	Unknown

CLINICAL PATHOLOGY

Laboratory Methods in the Diagnosis of Viral and Rickettsial Diseases (8.20)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.; course at Virus and Rickettsia Laboratories, U. S. P. H. S. Montgomery, Ala.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	80	10/14/57 3/10/58	10/25/57	C; 10 days	Nil
Laboratory Diagnosis of Virus Diseases	Laboratory Training Services, CDC P. O. Box 185, Chamblee, Ga. course at Virus and Rickettsia Section, CDC Montgomery, Ala.	G	SC	Lab, Sem, Lec, Pan, O, AV, EPP	108	10/14/57 3/10/58	10/25/57	C; 12 days	Nil
Laboratory Methods in the Diagnosis of Rabies (8.26)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga. course at Virus and Rickettsia Laboratories Montgomery, Ala.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	40	10/28/57 3/24/58	11/ 1/57	C; 5 days	Nil
Special Training in Virus Techniques (8.21)	Communicable Disease Center U. S. Public Health Service P. O. Box 185, Chamblee, Ga. course at Virus and Rickettsia Laboratories U. S. Public Health Service Montgomery, Ala.	Principally technical personnel, open to M.D.'s.	SC	Lab, EPP	80-160	Arranged		C; 10 to 20 days	Nil
Principles of Mycotic Infection and Laboratory Techniques of Diagnosis	Department of the Army Office of the Surgeon General, Education and Training Division Washington 25, D. C.; course at Armed Forces Institute of Pathology Walter Reed Army Medical Center, Washington, D. C.	S	SC	Lab, Pt. Dem, Sem, Pan, O, AV, EPP	30	5/19/58	5/23/58	C; 5 days	Nil
Laboratory Methods in the Diagnosis of Parasitic Diseases—Part I (8.00)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	160	9/ 9/57	10/ 4/57	C; 20 days	Nil
Laboratory Methods in the Diagnosis of Parasitic Disease—Part II (8.01)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	120	10/ 7/57	10/25/57	C; 15 days	Nil
Laboratory Methods in Medical Mycology (8.15)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	120	1/ 6/58	1/24/58	C; 15 days	Nil
Laboratory Methods in the Diagnosis of Tuberculosis (8.55)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	80	1/20/58	1/31/58	C; 10 days	Nil
Laboratory Methods in the Study of Pulmonary Mycoses (8.17)	Communicable Disease Center, U. S. P. H. S P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	80	2/ 3/58	2/14/58	C; 10 days	Nil
Laboratory Methods in the Diagnosis of Bacterial Disease—Part I (8.40)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	80	2/10/58	2/21/58	C; 10 days	Nil

Key will be found on page 1774.

CLINICAL PATHOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Laboratory Methods in the Diagnosis of Bacterial Diseases—Part II (8.41)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	80	2/24/58	3/ 7/58	C; 10 days	Nil
Serologic Methods in the Diagnosis of Parasitic and Mycotic Infections (9.41)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	80	3/10/58	3/21/58	C; 10 days	Nil
Laboratory Methods in the Diagnosis of Enteric Bacterial Diseases (8.50)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, Lec, O, AV, EPP	80	3/10/58	3/21/58	C; 10 days	Nil
A series of courses covering the bacteriophage typing of staphylococci, serologic differentiation of streptococci, special problems in enteric bacteriology, laboratory methods in the diagnosis of bacteriology	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, AV, EPP	80	Arranged		C; 10 days	Nil
A series of coures on Salmonella Typhosa, and Corynebacterium Diphtheriae	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, EPP	40	Arranged		C; 5 days	Nil
Laboratory Methods in the Diagnosis of Leptospirosis (8.53)	Communicable Disease Center, U. S. P. H. S. P. O. Box 185, Chamblee, Ga.	Principally technical personnel, open to M.D.'s.	SC	Lab, EPP	40-160	Arranged		C; 5 to 20 days	Nil
Clinical Chemistry	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	BC	Lab, Pt. Dem, WR, Lec, Pan, O, AV	14	2/17/58	2/18/58	C; 2 days	30
Clinical Pathology for General Physicians	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	BC	Lab, Lec, O	15	6/16/58	6/18/58	C; 3 days	30
Symposium on Clinical Chemistry Methods	Frank E. Bunts Educational Institute (Cleveland Clinic Foundation) 2020 E. 93rd Street, Cleveland	S and Lab. Tech.	BC	Sem, Lec, Pan, O, AV	20	11/13/57	11/15/57	C; 3 days	15
Laboratory Techniques and Usages	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lab, Pt. Dem, Sem, Lec	26	Arranged		I; 13 sessions 2 hr. weekly	100
Clinical Pathology	University of Oregon Medical School 3181 S.W. Sam Jackson Park Rd., Portland 1, Ore.	G	SCI	Lab, LC, WR, Sem, Lec, Pan, O, AV, EPP	16	1/58	3/58	I; 8 sessions 2 hr. weekly, Tuesdays	25

DERMATOLOGY

Current Therapy in Dermatology	University of California Medical Center Los Angeles 24	G	BC	Pt. Dem, LC, Sem, Lec, Pan, O, AV	15	10/24/57	10/26/57	C; 3 days	Unknown
Dermatology for the General Practitioner	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles	G	BC	Pt. Dem, LC, Lec, Pan, O	23	4/18/58	4/20/58	C; 3 days	37.50
Stanford Postgraduate Conference in Office Dermatology	Office of the Dean Stanford University Medical School 2398 Sacramento St., San Francisco	Unknown	BC	Unknown	15	9/19/57	9/21/57	C; 2½ days	Unknown
Dermatology	University of California Medical Center Second and Parnassus, San Francisco	G	BC	Pt. Dem, Lec, Pan, O	14	1/17/58	1/18/58	C; 2 days	Unknown
Dermatology for General Practitioners	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	BC	Lec, Pan	20	7/58	7/58	C; 3 days	30
General Dermatology	Cook County Graduate School of Medicine	G	SCI	Lab, Pt. Dem, LC,	25	9/19/57	11/21/57	I; 10 sessions	100

General Dermatology	Cook County Graduate School of Medicine 707 South Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O	25	9/19/57 3/20/58	11/21/57	I; 10 sessions 2½ hr. weekly, Thursdays	100
Course II in Dermatology	Cook County Graduate School of Medicine 707 South Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	60	10/14/57 5/ 5/58	10/26/57	C; 12 days	100
Clinical Dermatology	Cook County Graduate School of Medicine 707 South Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sem, O	120	Arranged		C; 4 weeks	125
Surgical Planing in Dermatology	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	S	BC	Lab, WR, Sem, Lec	24	10/17/57	10/19/57	C; 3 days	100
Symposium on Skin Cancer	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	S	BC	Lec, O	15	10/24/57	10/26/57	C; 3 days	30
Diseases of the Skin	University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	BC	Pt. Dem, LC, Sem, Lec, Pan, O, AV	6	3/12/58	3/12/58	C; 1 day	10
Dermatology	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	14	11/20/57	11/21/57	C; 2 days	30
Dermatology PM60 Treatment of Common Skin Disorders	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Lab, Pt. Dem, Lec, AV, EPP	18	1/ 6/58	3/ 3/58	I; 9 sessions 2 hr. weekly, Mondays	40
Diagnosis and Treatment of Common Skin Disorders	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Beth-El Hospital, Brooklyn, N. Y.	G	SCI	Pt. Dem, Lec	8	10/57 4/58	12/57	I; 8 sessions 1 hr. weekly, Tuesdays	20
Dermatology and Syphilology	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, Lec, Pan, O, AV, EPP	1920	10/ 1/57 4/ 1/58	9/30/58	C; 288 days	500
521-A. Comprehensive Review in Dermatologic Histopathology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab, Lec	35	9/16/57	9/20/57	C; 5 days	85
522-A. Seminar in Dermatology and Syphilology (Designed for General Physicians)	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, Lec	35	2/17/58	2/21/58	C; 5 days	85
523-A. Symposium on Dermatology and Syphilology (For Dermatologists)	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, Lec	35	5/19/58	5/23/58	C; 5 days	100
Dermatology	University of Oregon Medical School 3181 S.W. Sam Jackson Park Rd., Portland 1, Ore.	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	15	4/14/58	4/15/58	C; 2 days	20
Dermatology	Albert Einstein Medical Center—Northern Division York & Tabor Rd., Philadelphia	G	SCI	Pt. Dem, LC, Sur, O, EPP	20	10/10/57	12/19/57	I; 10 sessions 2 hr. weekly, Thursdays	35
Dermatology for the Internist and General Practitioner	Graduate Hospital 19th and Lombard Sts., Philadelphia	B	SCI	Lec, AV	Unknown	1/ 6/58	4/14/58	I; 15 sessions 1 hr. weekly, Mondays	20
Dermatology	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	24	2/26/58	2/28/58	C; 3 days	50
Dermatologic Principles for the General Practitioner	Dr. Robert C. Parkin, Assistant to the Dean University of Wisconsin Medical School 418 N. Randall Ave., Madison, Wis.	G	BC	Pt. Dem, LC, Lec, O	18	3/11/58	3/13/58	C; 3 days	25
				ELECTROCARDIOGRAPHY					
835—Basic Home Course in Electrocardiography—Interpretation	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	G	HS(C)	HS; (EPP-C)	52	9/18/57 10/16/57 11/13/57 12/12/57 1/15/58	9/18/58	Given once weekly	100
836—Advanced Home Course in Electrocardiography—Interpretation	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles	G	HS(C)	HS; (EPP-C)	52	9/18/57 10/16/57 11/13/57 12/12/57 1/15/58	9/18/58	Given once weekly	85
834—Practical Electrocardiography—Interpretation	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles	G	BC	Lec, O	23	10/ 4/57	10/ 6/57	C; 3 days	75
Modern Concepts of Electrocardiographic Interpretation	Colorado Heart Association 1636 Logan St., Denver course at Veterans Administration Hospital, Denver	G	BC	Lec, Pan, AV	15	9/ 3/57	9/ 5/57	C; 3 days	Unknown
Clinical Electrocardiography	University of Colorado Medical Center 4200 E. Ninth Ave., Denver 20	B	BC	Pt. Dem, Lec, Pan	16	9/ 3/57	9/ 4/57	C; 2 days	15
Fundamentals of Electrocardiography	University of Colorado Medical Center 4200 E. Ninth Ave., Denver 20	G	SCI	Lec	Unknown	9/57	12/57	I; once weekly, for 11 weeks	10

Key will be found on page 1774.

ELECTROCARDIOGRAPHY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Medicine 214, Advanced Clinical Electrocardiography	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	G	SCI	Lec, AV	12	10/ 1/57	12/17/57	I; 12 sessions 1 hr. weekly, Tuesdays	50
Elementary Clinical Electrocardiography	The Lawrence and Memorial Associated Hospitals 365 Montauk Ave., New London, Conn.	G	SCI	Sem, O, AV	34 or more	9/19/57	2/58	I; 17 sessions or more, 2-2½ hr. weekly, Tuesdays	70
Advances in Electrocardiographic Diagnosis and Treatment of Arrhythmias	Mount Sinai Hospital of Greater Miami 4300 Alton Rd., Miami Beach, Fla.	S	SC	Lec, O, AV	15	11/18/57	11/22/57	C; 5 days	25
Interpretation of Complex Arrhythmias	Michael Reese Hospital 29th St. and Ellis Ave., Chicago	S	SC	Sem, O, AV, EPP	30	12/ 9/57	12/13/57	C; 5 days	100
Electrocardiographic Interpretation	Michael Reese Hospital 29th St. and Ellis Ave., Chicago	G	SC	Sem, Lec, O, EPP	80	8/18/58	8/31/58	C; 12 days	150
One-Week Advanced Course in Electrocardiography	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Lec, O, AV, EPP	40	6/23/58	6/27/58	C; 5 days	150
Physiologic Principles Underlying Electrocardiagram Interpretation	Indianapolis General Hospital 960 Locke St., Indianapolis	G	SCI	Lec, O, AV, EPP	50	10/ 3/57	2/58	I; 25 sessions 1½-2 hr. weekly, Thursdays	Nil
Basic Electrocardiography	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Lec, Pan, O, AV	24	3/ 3/58	3/ 5/58	C; 3 days	30
Interpretation of Electrocardiograms—I	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	HS(C)	HS (EPP & C)	13	10/11/57 4/ 4/58	4/11/58	26 weekly lessons	18
Interpretation of Electrocardiograms—II	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	HS(C)	HS (EPP & C)	13	11/ 7/57 5/ 1/58	5/ 8/58	26 weekly lessons	17
Practical Electrocardiography and Spatial Vectorcardiography	Heart Station, Prince Georges General Hospital Cheverly, Md.	B	SCI	Sem, Lec, O	30 min.	10/57	12/57	I; 15-20 sessions 2 hr. weekly, Fridays	30
Practical Electrocardiography, Course "B"	Beth Israel Hospital 330 Brookline Ave., Boston	G	SCI	Lec, O, AV, EPP	30	10/ 2/57	12/ 4/57	I; 10 sessions 3 hr. weekly, Wednesdays	100
Practical Electrocardiography, Course "A"	Beth Israel Hospital 330 Brookline Ave., Boston	G	SC	Lec, O, AV, EPP	30	11/ 4/57	11/ 8/57	C; 5 days	100
EKG Clinics, Course "D"	Beth Israel Hospital 330 Brookline Ave., Boston	G	SCI	Lec, O, AV, EPP	30	3/ 5/58	5/14/58	I; 10 sessions 3 hr. weekly, Wednesdays	100
EKG Clinics, Course "C"	Beth Israel Hospital 330 Brookline Ave., Boston	G	SC	Lec, O, AV, EPP	30	4/21/58	4/25/58	C; 5 days	100
Electrocardiography I	Tufts University School of Medicine Postgraduate Division 171 Harrison Ave., Boston	G	SC	Pt. Dem, Lec, Pan, AV	25	12/ 2/57	12/ 6/57	C; 5 days	40
Electrocardiography II	Tufts University School of Medicine Postgraduate Division 171 Harrison Ave., Boston	G	BC	Pt. Dem, Lec, Pan, EPP	18	5/12/58	5/14/58	C; 3 days	25
Electrocardiographic Diagnosis	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	SC	Pt. Dem, Lec, Dem, O, AV	34	4/21/58	4/26/58	C; 5½ days	75
Basic Electrocardiography	Highland Park General Hospital 369 Glendale, Highland Park, Mich.	B	SCI	Lec, AV	16	10/15/57	2/15/58	I; 16 sessions 1 hr. weekly	Nil
Electrocardiography for General Physicians and Specialists	Robert B. Howard, M. D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	B	SC	Lab, Sem, Lec, Pan, O	30	5/ 5/58	5/ 9/58	C; 5 days	50
Basis and Clinical Electrocardiography	St. Michael's Hospital 306 High St., Newark, N. J.	G	SCI	Lec, O, AV	12	9/25/57	4/30/58	I; 12 sessions 1 hr. weekly, Wednesdays	25
Principles of Electrocardiography	Albany Medical College 47 New Scotland Ave., Albany, N. Y.; course at Veterans Administration Hospital, Albany, N. Y.	G	SCI	Sem, Lec, O	12	9/12/57	10/17/57	I; 6 sessions 2 hr. weekly, Thursdays	60
Advanced Electrocardiography	Albany Medical College 47 New Scotland Ave., Albany, N. Y.; Course at Veterans Administration Hospital, Albany, N. Y.	G	SCI	Sem, Lec, Pan, O	12	10/24/57	12/ 5/57	I; 6 sessions 2 hr. weekly, Thursdays	60
...ples of Electrocardiography ...al Two-Way Radio	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y. to selected area hospitals	G	CC(R)	Lec, O, Two-Way Radio	18	1/ 6/58	2/13/58	12 sessions 1½ hr. twice weekly, Mondays, Thursdays	60
Advanced Course in Interpretation	Albany Medical College	G	SCI	Lec	12	2/19/58	3/26/58	I; 6 sessions 2 hr. weekly,	60

Advanced Course in Interpretation of Electrocardiograms	Albany Medical College 47 New Scotland Ave., Albany, N. Y.	G	SCI	Lec	12	2/19/58	3/26/58	I; 6 sessions 2 hr. weekly, Wednesdays	60
Clinical Correlations of Electrocardiograms with Disease Processes (Hospitalized Patients)	Albany Medical College 47 New Scotland Ave., Albany, N. Y.	G	SCI	Pt. Dem, Sem, Lec, O, EPP	24	Arranged		I; 12 2-hr. sessions arranged	60
Electrocardiography	Meadowbrook Hospital Carman Ave. and Bethpage Turnpike, Hempstead, N. Y.	G	SCI	Lec	15	1/15/58	4/23/58	I; 15 sessions 1 hr. weekly, Wednesdays	25
Medicine PM63A Clinical Electrocardiography	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Lec, AV	36	9/24/57 2/ 4/58	1/28/58	I; 18 sessions 2 hr. weekly, Tuesdays	100
Medicine (PM40)	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SC	Pt. Dem, Sem, Lec, EPP	30	10/14/57 1/13/58	10/25/57	C; 10 days	75
PM 43 Medicine Vectorcardiography	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SC	LC, Lec	48	12/ 2/57	12/ 7/57	C; 6 days	75
Basic Electrocardiography in Clinical Medicine	Joint Committee on Postgraduate Education of Kings Medical Society 1313 Bedford Ave., Brooklyn 16, N. Y.; course at Beth-El Hospital, Brooklyn, N. Y.	G	SCI	Lec, AV	12	10/57 4/58	Unknown	I; 6 sessions 2 hr. weekly, Mondays and Fridays	20
Interpretation of the Electrocardiogram	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Coney Island Hospital, Brooklyn, N. Y.	G	SCI	Lec	10	10/57 4/58	12/57	I; 10 sessions 1 hr. weekly, Tuesdays	20
Interpretation of Electrocardiographic Tracings	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SC	Lec	12½	Arranged		C; 10 days	100
Practical Electrocardiography	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Pt. Dem, LC, Sem, Lec, AV	10	4/ 1/58	4/ 5/58	C; 5 days	100
5416-A Fundamentals of Clinical Electrocardiographic Interpretation	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec	32	11/ 6/57	3/ 5/58	I; 16 sessions 2 hr. weekly, Wednesdays	50
5412-A Electrocardiography	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, AV Lec	35	11/11/57 3/21/58	11/15/57	C; 5 days	85
5411-A Clinical Electrocardiography	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, Lec, AV	12	4/10/58	5/29/58	I; 8 sessions 1½ hr. weekly, Thursdays	50
Basic Principles of Electrocardiography	Rochester General Hospital West Side 501 W. Main St., Rochester, N. Y.	G	SCI	Lec, Pan, O, AV	20	9/19/57	12/12/57	I; 10 sessions 2 hr. weekly, Thursdays	20
Basic Principles of Electrocardiography	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	G	SCI	Lab, Lec, AV	14	10/ 3/57	11/ 7/57	I; 7 sessions 2 hr. weekly, Thursdays	15
Electrocardiographic Interpretation	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	G	SCI	Lab, Lec, O, AV, EPP	14	4/10/58	5/22/58	I; 7 sessions 2 hr. weekly, Thursdays	15
Electrocardiographic Review, Advanced	Duke University School of Medicine Durham, N. C.	G	BC	Lab, Pt. Dem, LC, WR, Lec, Pan	18	1/58		C; 3 days	100 Paid by N. C. Health Dept.
Electrocardiographic Review, Primary	Duke University School of Medicine Durham, N. C.	G	BC	Lab, Pt. Dem, LC, WR, Lec, Pan	18	6/58		C; 3 days	100 Paid by N. C. Health Dept.
Electrocardiographic Diagnosis	Mount Sinai Hospital 1800 E. 105th St., Cleveland	G	SCI	Lab, Lec	18	10/57	1/58	I; 12 sessions 1½ hr. weekly, Wednesdays	10
Basic Electrocardiography	Albert Einstein Medical Center—Southern Division Fifth & Reed Sts., Philadelphia	G	SCI	Pt. Dem, Lec, AV	30	11/13/57	1/29/58	I; 10 sessions 3 hr. weekly, Wednesdays	50
Advanced Electrocardiography	Albert Einstein Medical Center—Southern Division Fifth & Reed Sts., Philadelphia	G	SCI	Lab, Pt. Dem, Lec	30	2/19/58	4/23/58	I; 10 sessions 3 hr. weekly, Wednesdays	50
Elementary Electrocardiography	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	24	9/ 4/57	9/ 6/57	C; 3 days	50
Electrocardiographic Interpretation and Cardiologic Advances	Dr. Robert C. Parkin, Assistant to the Dean University of Wisconsin Medical School 418 N. Randall Ave., Madison, Wis.	G	BC	Pt. Dem, LC, Lec, O	18	11/12/57	11/14/57	C; 3 days	25

Key will be found on page 1774.

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
				ELECTROENCEPHALOGRAPHY					
Neurology PM33 Clinical Electroencephalography	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SCI	Lab, LC	45	9/26/57	1/ 9/58	I; 15 sessions 3 hr. weekly, Thursdays	100
556-A Electroencephalography	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, Dem, AV	12	10/ 7/57 3/ 3/58	11/25/57	I; 8 sessions, 1½ hr. weekly, Mondays	35
642-A Electroencephalography	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab.	160	By arrangement		C; 8 weeks	300
				ENDOCRINOLOGY (See also Internal Medicine)					
Dynamics of Endocrine and Metabolic Disease	Institute for Metabolic Research Highland-Alameda County Hospital 2701—14th Ave., Oakland, Cal.	S	BC	Pt. Dem, LC, Lec, Pan, O	24	2/10/58	2/12/58	C; 3 days	75
Collagen Diseases	University of California at Los Angeles Medical Center Los Angeles 24	G	BC	Pt. Dem, Lec, Pan, O, AV	12	March/58		C; 2 days	Unknown
Disorders of Fluid and Electrolyte Metabolism, Etiology and Management	University of California at Los Angeles Medical Center Los Angeles 24	G	SCI	Lec, Pan, O, AV	16	Spring/58		I; 8 sessions 2 hr. weekly	50
Sacramento Evening Series—Endocrinology	University of California Medical Extension Second and Parnassus, San Francisco; course at Mercy Hospital, Sacramento, Calif.	G	BCI	Lec, O	9	9/25/57	11/20/57	I; 3 sessions 3 hr. Wednesdays once a month	40
Endocrinology	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	G	SCI	Lec	Unknown	1/58	3/58	I; 1 hr weekly, for 11 wks.	10
9th Postgraduate Assembly in Endocrinology and Metabolism	Dr. Robert B. Greenblatt University of Georgia School of Medicine Augusta, Ga.	G	SC	Lab, Pt. Dem, LC, Sem, Lec, Pan, O, AV	43	10/21/57	10/25/57	C; 5½ days	100
Endocrinology	University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	BC	Pt. Dem, Sem, Lec, Pan, O, AV	9	2/ 7/58	2/ 8/58	C; 1½ days	15
Recent Advances in Endocrinology	St. Michael's Hospital 306 High St., Newark, N. J.	G	BCI	Lab, Lec, O	8	10/ 9/57	2/12/58	I; 4 sessions 2 hr. mo., Wednesdays	25
Adrenal Hormone Therapy in Practice	Albany Medical College 47 New Scotland Ave., Albany, N. Y.	G	BCI	Pt. Dem, LC, Sem, O, TV	18	2/20/58	3/13/58	I; 4 sessions 4½ hr. weekly, Thursdays	12 a day or 40 for course
Sex Hormones in Adolescence and Senescence	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	BCI	Pt. Dem, LC, Sem, O, TV	9	3/20/58	3/27/58	I; 2 sessions 4½ hr. on each of 2 Thursdays	12 a day or 20 for course
Metabolic Endocrinology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y. course at Maimonides Hospital, Brooklyn, N. Y.	G	SCI	Pt. Dem, Lec	15	10/57	12/57	I; 10 sessions 1½ hr. weekly, Tuesdays	20
Endocrinology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y. course at Jewish Hospital, Brooklyn, N. Y.	G	SCI	Pt. Dem, Lec	12	10/57 4/58	12/57	I; 12 sessions 1 hr. weekly, Thursdays	20
Endocrinology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SCI	Lab, Sem	70	Arranged		I; 14 days	100
3423-A Endocrinology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, Lec	23	4/ 7/58	5/29/58	I; 23 sessions, 1 hr. thrice weekly, Mon- days, Thursdays, Fridays	45
Clinical Endocrinology	Albert Einstein Medical Center—Southern Division Fifth & Reed Sts., Philadelphia	G	SCI	Pt. Dem, LC, Lec, Pan, AV	39	11/27/57	3/ 5/58	I; 13 sessions 3 hr. weekly, Wednesdays	60
Gynecic Endocrinology for Internists	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	B	SCI	Lec	12	10/57		I; 12 sessions 1 hr. weekly, Mondays	15
Endocrinology for Internists	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	LC, Lec, O	18½	1/ 7/58	4/15/58	I; Tuesdays for 15 wks.	30

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
				ENDOSCOPY					

Endocrinology for Internists	**University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia**	**G**	**SCI**	**LC, Lec, O**	**18½**	**1/ 7/58**	**4/15/58**	**I; Tuesdays for 15 wks.**	**30**
				ENDOSCOPY					
Removal of Foreign Bodies From Lung and Bronchi	University of California Medical Center Los Angeles 24	G	BC	Lab, Lec, AV	Unknown	Fall/57	Unknown	C; 1½ days	100
Bronchoesophagology	University of Illinois College of Medicine 1853 W. Polk St., Chicago 12	S	SC	Lab, Pt. Dem, LC, WR, Animal Sur, Sem, Lec, Pan, O, AV, EPP	84	11/ 4/57	11/16/57	C; 12 days	210
Gastroscopy	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y. course at Coney Island Hospital, Brooklyn, N. Y.	G	SCI	Lec, AV	15	4/58	5/58	I; 6 sessions 2½ hr. weekly, Mondays	30
Gastroscopy	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SCI	Pt. Dem, Lec, EPP	25	Arranged		I; 13 days	200
Gastroscopy (Advanced)—Instrumentation and Interpretation	New York Medical College Flower and Fifth Ave. Hospitals Fifth Avenue and 106th St., New York	G	SCI	Pt. Dem, Lec, EPP	25	Arranged		I; 13 days	200
Peritoneoscopy	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SC	Lec, AV	Arranged	Arranged		C; arranged	100
5427-A Gastroscopy and Flexible Tube Esophagoscopy	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, Pt. Dem, EPP	36	9/ 9/57 12/ 2/57 3/ 3/58	12/ 9/57	I; 36 sessions 1 hr. thrice weekly, Mondays, Wednesdays, Fridays	300
Bronchoesophagology	Temple University School of Medicine and Hospital 3400 N. Broad St., Philadelphia 40	B	SC	Lab, Pt. Dem, LC, Sur, Sem, Lec, Pan, O, AV	80	9/ 9/57	9/20/57	C; 11 days	250
				FORENSIC MEDICINE					
Forensic Pathology	Department of the Army Office of the Surgeon General, Education and Training Division Washington 25, D. C. course at Armed Forces Institute of Pathology, Washington, D. C.	S	SC	Lab, Sem, Lec, Pan, O, AV, TV	40	11/ 4/57	11/ 8/57	C; 5 days	Nil
533-A Toxicology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab, Sem, Lec	Varies	Unknown		Unknown	100
Investigation of Homicide	University of Cincinnati College of Medicine, Institute of Industrial Health Eden and Bethseda, Cincinnati	Unknown	SC	Sem, Lec, Pan, O, AV	48	11/11/57	11/16/57	C; 5½ days	50
				FRACTURES					
Management of Fractures	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Sur, Lec, O	60	9/18/57 3/19/58	11/21/57	I; 10 sessions 6 hr. weekly, Wednesdays	125
Course II—Clinical Fractures	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV, EPP	20	Arranged	Saturday following starting date	C; 5 days	50
Course III in Fractures and Traumatic Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago, Ill.	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	86	10/21/57 3/10/58 6/16/58	11/ 2/57	C; 12 days	150
Trauma and Fractures	State University of Iowa College of Medicine University Hospitals Iowa City	G	BC	Pt. Dem, LC, WR, Lec, Pan, O, AV	12-14	9/18/57	9/19/57	C; 2 days	30
Treatment of Fractures and Other Traumatic Conditions	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Massachusetts General Hospital, Boston	G	SC	Pt. Dem, LC, Lec, Pan, AV	46	10/ 7/57	10/12/57	C; 6 days	150
Fractures for General Physicians	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	BC	Pt. Dem, Lec, O	18	12/ 5/57	12/ 7/57	C; 3 days	30
Fractures and Allied Trauma	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SC	Pt. Dem, Sem, Lec, AV	160	Arranged		C; 20 days	200
Fractures and Dislocations	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	24	4/ 9/58	4/11/58	C; 3 days	50
Postgraduate Fracture Course	The American Fracture Association 610 Griesheim Bldg., Bloomington, Ill. and University of Texas Postgraduate School of Medicine; course at El Paso County Medical Society Headquarters, El Paso, Tex.	G	BC	Pt. Dem, LC, Lec, O, AV	8	9/29/57	9/29/57	C; 1 day	10

Key will be found on page 1774.

FRACTURES—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Treatment of Fractures and Dislocations	Department of the Army Office of the Surgeon General, Education and Training Division Washington 25, D. C.; course at Brooke Army Hospital Brooke Army Medical Center, Ft. Sam Houston, Tex.	B	BC	Lec, Pan, O, AV	19	3/14/58	3/16/58	C; 3 days	Nil

GASTROENTEROLOGY

Gastroenterology	Emory University School of Medicine Emory University, Atlanta, Ga.	G	BC	Lec, Pan, O, AV	16	11/ 8/57	11/ 9/57	C; 2 days	25
Gastroscopy and Gastroenterology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	40	9/ 9/57 11/ 4/57 3/17/58	9/21/57	C; 12 days	200
One Week Advanced Course in Gastroscopy and Gastroenterology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	25	Arranged		C; 6 days	150
Gastroenterology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	20	9/18/57 3/19/58	11/20/57	I; 10 sessions 2 hr. weekly, Wednesdays	100
Gastroenterology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O	60	9/18/57 3/19/58	11/20/57	I; 10 sessions 6 hr. weekly, Wednesdays	100
Gastroenterology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	60	10/21/57 4/15/58	11/ 2/57	C; 12 days	150
Clinical traineeship in Gastroenterology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	MT	Lab, Pt. Dem, LC, WR, Sem, Lec, O, AV	Arranged	Arranged			50 per mo. residents of Kansas; 100 per mo. non-residents
Gastroenterology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	14	1/15/58	1/16/58	C; 2 days	30
Postgraduate Gastroenterology	American College of Gastroenterology 33 W. 60th St., New York; course at The Somerset Hotel, Boston	B	BC	LC, Lec	18	10/17/57	10/19/57	C; 3 days	35 for members 50 for non-members
Gastroenterology for General Physicians	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota Minneapolis 14	G	BC	Lec, O	15	4/14/58	4/16/58	C; 3 days	30
Medicine PM70 Gastroenterology	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Pt. Dem, WR, Lec	52½	9/10/57	12/17/57	I; 15 sessions 3½ hr. weekly, Tuesdays	75
Medicine PM73 Advanced Gastroenterology	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Pt. Dem, WR, Lec	52½	1/14/58	4/29/58	I; 15 sessions 3½ hr. weekly, Tuesdays	75
PM45—Medicine Gastroenterology	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SC	LC, Lec	35	4/ 7/58	4/11/58	C; 5 days	75
Gastroenterology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SCI	Lec	30	Arranged		I; 3 weeks	100
Clinical Gastroenterology	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, Lec	60	4/ 1/58	4/30/58	C; 24 days	75
5425-A Clinical Gastroenterology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, Lec	35	10/28/57	11/ 1/57	C; 5 days	75
5426-A Gastroenterology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, Pt. Dem, AV, O	24	4/ 9/58	5/28/58	1; 8 sessions 3 hr. weekly, Wednesdays	40
Gastroenterology	Rochester General Hospital West Side 501 W. Main St., Rochester, N. Y.	G	BC	Pt. Dem, Sem, Lec, Pan	12	1/22/58	1/23/58	C; 2 days	10
Latest Advances in Gastroenterology	American College of Physicians 4200 Pine St., Philadelphia 4; course at Duke University School of Medicine, Durham, N.C.	S	SC	Lec, Pan, O, AV	35-40	1/58 or 2/58		C; 5 days	30 A.C.P. members; 60 non-members
Diseases of the Liver and Biliary Tract	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Lec, AV	30	9/26/57	5/15/58	I; 30 sessions 1 hr. weekly, Thursdays	25
	University of Pennsylvania Graduate School of	B	SCI	Lab, Lec, O, AV	60	9/26/57	5/15/58	I; 30 sessions	50

Diseases of the Liver and Biliary Tract	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Lec, AV	30	9/26/57	5/15/58	I; 30 sessions 1 hr. weekly, Thursdays	25
Conference in Gastroenterology	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	B	SCI	Lab, Lec, O, AV	60	9/26/57	5/15/58	I; 30 sessions 2 hr. weekly, Thursdays	50
Clinical Gastroenterology	Albert Einstein Medical Center—Northern Division York & Tabor Rd., Philadelphia	G	SCI	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, EPP	24	11/ 6/57	2/ 5/58	I; 12 sessions 2 hr. weekly	50

GENERAL PRACTICE
(See also Pathology, Radiology, and All Other Categories)

Regional Postgraduate Institute for West Coast Counties	California Medical Assoc. 417 S. Hill St., Los Angeles; course at Golden Bough Theater & La Playa Hotel, Carmel, Calif.	G	BC	Pt. Dem, Lec, Pan, O, AV	12	3/ 6/58	3/ 7/58	C; 2 days	20
Regional Postgraduate Institute for San Joaquin Valley Counties	California Medical Assoc. 417 S. Hill St., Los Angeles; course at Hotel Californian, Fresno, Calif.	G	BC	Lec, Pan, O, AV	12	3/20/58	3/21/58	C; 2 days	20
Regional Postgraduate Institute for North Coast Counties	California Medical Assoc. 417 S. Hill St., Los Angeles; course at Hobergs' Resort, Lake County, Calif.	G	BC	Lec, Pan, O, AV	12	4/10/58	4/11/58	C; 2 days	20
Regional Postgraduate Institute for Sacramento Valley Counties	California Medical Assoc. 417 S. Hill St., Los Angeles; course at Tahoe Tavern, Lake Tahoe, Calif.	G	BC	Sem, Lec, O, AV	12	6/19/58	6/20/58	C; 2 days	20
North Coast Counties Circuit Course	California Medical Assn. 417 S. Hill St., Rm. 938, Los Angeles; course at various hospitals and hotels in:	G	CC	Pt. Dem, LC, Lec, O, AV	16 (lecture) 12 (clinic)			4 sessions in autumn, 4 in spring	30
	Eureka, Cal.					10/ 3/57	3/24/58	Mondays	
	Ukiah, Cal.					10/ 4/57	3/25/58	Tuesdays	
	Napa, Cal.					10/ 5/57	3/26/58	Wednesdays	
Sacramento Valley Counties Circuit Course	California Medical Assn. 417 S. Hill St., Rm. 938, Los Angeles; course at various hospitals and hotels in:	G	CC	Pt. Dem, LC, Lec, O, AV	16 (lecture) 12 (clinic)			Four 3½ hr. sessions in autumn, 4 in spring	30
	Dunsmuir, Cal.					10/ 3/57	3/24/58	Mondays	
	Chico, Cal.					10/ 4/57	3/25/58	Tuesdays	
	Marysville, Cal.					10/ 5/57	3/26/58	Wednesdays	
	Auburn, Cal.					10/ 6/57	3/27/58	Thursdays	
Teaching Clinics	University of California Medical Center Los Angeles 24	G	SCI	Sem, Lec, Pan, O, AV	24	9/26/57	12/19/57	I; 12 sessions 2 hr. weekly, Thursdays	Unknown
Postgraduate Medical Lecture Series	University of California Medical Center Los Angeles 24; course at St. Joseph's Hospital Burbank, Cal.	G	SCI	Lec, Pan, O, AV	24	9/24/57	12/10/57	I; 12 sessions 2 hr. weekly, Tuesdays	50
Dermatology in General Practice	University of California at Los Angeles Medical Center Los Angeles 24	G	SCI	Pt. Dem, Lec, Pan, AV	12	Spring/58		I; 6 sessions 2 hr. weekly	50
Medicine for General Practitioners	University of California Medical Extension Second and Parnassus Aves., San Francisco; course at East Oakland Hospital, Oakland, Calif.	G	SCI	Lec	24	9/17/57	12/10/57	I; 12 sessions 2 hr. weekly, Tuesdays	50
Regional Postgraduate Institute for San Bernardino, Riverside and Orange Cos.	California Medical Assn. 417 S. Hill St., Rm. 938, Los Angeles; course at Arrowhead Springs Hotel, San Bernardino, Calif.	G	BC	Lec, Pan, O, AV	12	2/13/58	2/14/58	C; 2 days	20
Course for Physicians in General Practice	University of California Medical Extension Second and Parnassus, San Francisco; course at Mount Zion Hospital, San Francisco	G	SC	Lec, Pan, AV	35	3/ 3/58	3/ 7/58	C; 5 days	Unknown
West Coast Counties Circuit Course	California Medical Assn. 417 Hill St., Los Angeles; courses at various hospitals in:	G	CC	LC, Lec, O, AV	14			3½ hr. weekly for 4 wk. at each location	20
	San Luis Obispo, Cal.					3/ 3/58	3/24/58		
	Santa Maria, Cal.					3	3/25/58		
	Santa Barbara, Cal.					3/ 5/58	3/26/58		
Saint John's Hospital Postgraduate Assembly	Saint John's Hospital, John C. Eagan, M.D., Director, Postgraduate Assembly 1328 22nd St., Santa Monica, Cal.	G	BC	Pt. Dem, WR, Sem, Lec, Pan, O	28	9/12/57	9/14/57	C; 3 days	Nil
Prevention and Management of Athletic Injuries	University of Colorado Medical Center 4200 E. Ninth Ave., Denver 20	G	BC	Lec, Pan	24	9/ 9/57	9/11/57	C; 3 days	30
General Practice Review	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	G	SC	Pt. Dem, Lec, Pan, O, AV	45	1/13/58	1/18/58	C; 6 days	60

Key will be found on page 1774.

GENERAL PRACTICE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Ninth Annual Colorado Intern-Resident Clinics	University of Colorado Medical Center 4200 E. Ninth Ave., Denver	B	BC	Pt. Dem, LC, Lec, Pan	16	5/58	5/58	C; 2 days	Nil
Colorado Medical Alumni Clinics	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver	B	BC	Lec, Pan	8	6/58	6/58	C; 1 day	Nil
Summer School of Alcohol Studies	Yale University Summer School of Alcohol Studies 52 Hillhouse Ave., Yale Station, New Haven, Conn.	G	SC	Pt. Dem, Sem, Lec, Pan, O, AV	74	7/ 1/58	7/24/58	C; 22 days	Unknown
Principles of Medical Operations in Nuclear Warfare	Department of the Army Office of the Surgeon General, Education and Training Division, Washington, 25, D.C.; course at Walter Reed Army Medical Center, Washington, D.C.	O (Selected Staff Officers)	SC	Lab, Sem, Lec, Pan, O, AV, TV	200	9/ 3/57	10/ 5/57	C; 25 days	Nil
Management of Mass Casualties	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D.C.; course at Walter Reed Army Institute of Research, Walter Reed Army Medical Center	G	SC	Lec, Pan, O, AV, TV	44	9/ 9/57 12/ 2/57 3/24/58 5/12/58	12/ 2/57	C; 6 days	Nil
Medico-Military Application Course for Nuclear Medical Officer	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D. C.; course at Walter Reed Army Medical Center, Washington, D.C.	O (Selected Staff Officers)	SC	Lab, Sem, Lec, Pan, O, AV, TV	240	3/24/58	5/ 2/58	C; 30 days	Nil
26th Annual Graduate Short Course	Division of Postgraduate Education, College of Medicine University of Florida, Gainesville, Fla.; course at place to be determined	G	SC	Lec, Pan, O, AV	30	6/23/58	6/27/58	C; 5 days	10
8th Annual Postgraduate Seminar	R. E. Drosd, M.D., Mount Sinai Hospital 4300 Alton Rd., Miami, Fla.	B	BC	Sem, Lec, Pan, O, AV	24	11/22/57	11/25/57	C; 4 days	20
Medicine for Today	Illinois Academy of General Practice 14 E. Jackson Blvd., Chicago 4; course at Alton; Belleville; Swedish Covenant Hospital, South Chicago Community Hospital, Illini Union Building, Chicago; Chicago Heights; East St. Louis; Effingham; Elmhurst; Geneva; Herrin; Hinsdale; Joliet; Moline; Mount Carmel; Mount Vernon-Centralia; Oak Park; Peoria; Rockford; Springfield	G	CC	Lec, O, AV	24	9/ 8/57 3/31/58	10/18/57	12 sessions 2 hr. each	40 for members; 80 for non-members
General Medicine with Special Reference to Cardiovascular Renal, Respiratory Diseases, and the Alimentary Tract	Chicago Medical Society 86 E. Randolph St., Chicago; course at Knickerbocker Hotel, Chicago	G	SC	Lec, Pan, O	32½	11/ 4/57	11/ 8/57	C; 5 days	75
Obstetrics, Gynecology and Pediatrics	Chicago Medical Society 86 E. Randolph St., Chicago; course at Knickerbocker Hotel, Chicago	G	SC	Lec, Pan, O	32½	11/11/57	11/15/57	C; 5 days	75
General Medicine	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Pt. Dem, LC, WR, Lec, O, EPP	20	9/18/57 3/19/58	11/20/57	I; 10 sessions 2 hr. weekly, Wednesdays	100
Clinical Pathological Conference	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	G	SCI	Pan, O, AV	100	9/ 3/57	8/28/58	I; 50 sessions 2 hr. weekly, Thursdays	Varies
Refresher Course for the General Physician	State University of Iowa College of Medicine University Hospitals, Iowa City	G	BC	Pt. Dem, Lec, Pan, O, AV	21-25	2/18/58	2/21/58	C; 4 days	50 (Members of the Iowa Academy of General Practice-5)
Kansas Circuit Course in General Medicine and Surgery	University of Kansas School of Medicine; course at St. Joseph's Hospital, Concordia, Ks.; Riley County Hospital, Manhattan, Ks.; Country Club, Colby, Ks.; Grace Hospital, Hutchinson, Ks.; William Newton Memorial Hospital, Newton, Ks.; St. Anthony Hospital, Hays, Ks.; Trinity Hospital, Dodge City, Ks.; Newman Memorial Hospital, Emporia, Ks.	G	CC	Pt. Dem, LC, Lec, Pan, O, AV	33 at each location	12/ 3/57 12/ 3/57 12/ 4/57 12/ 4/57 12/ 5/57 12/ 5/57 12/ 6/57 12/ 6/57	4/25/58	5½ hr. one day a mo.; afternoon and evening for 6 mos.	30
General Medicine and Surgery	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	SCI	Pt. Dem, Lec, Pan, O, AV	24	11/21/57	4/17/58	I; 6 sessions 4 hr. weekly, Thursdays	20 non-members K. C. or Wyandotte

Trinity Hospital, Dodge City, Ks.; Newman Memorial Hospital, Emporia, Ks.						12/ 5/57 12/ 6/57 12/ 6/57			
General Medicine and Surgery	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	SCI	Pt. Dem, Lec, Pan, O, AV	24	11/21/57	4/17/58	I; 6 sessions 4 hr. weekly, Thursdays	20 non-members K. C. or Wyandotte Academies 10 members
School Health Conference	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BC	Sem, Lec, Pan, O	8	10/10/57	10/10/57	C; 1 day	Nil
Review for Practitioners of Medicine	Louisiana State University School of Medicine 1542 Tulane Ave., New Orleans; course at Confederate Memorial Hospital, Shreveport, La.	G	SCI	Pt. Dem, LC, Sem, Lec, Pan, O, AV	126	9/ 4/57	5/28/58	I; 18 sessions 8 hr. every second Wednesday or Thursday	Unknown
Practitioners' Course	University of Michigan Medical School, Department of Postgraduate Medicine Ann Arbor, Mich.; course at 17 centers in the State of Michigan (information not provided)	G	CC	Pt. Dem, Lec, AV	Unknown	10/57	10/57	2 days in each center—1 in spring and 1 in fall	Nil
Symposium on Medicine	F. P. Rhoades, M.D., Chairman Educational Program Comm., Wayne County Academy of General Practice 970 Maccabees Bldg., Detroit; course at Sheraton-Cadillac Hotel, Detroit	G	BC	Sem, Lec, Pan, O, AV	2	9/11/57	9/11/57	C; 1 day	Nil
Annual Refresher	James A. Blake, M.D. Ex. Sec. Minnesota Academy of General Practice 15 Ninth Ave., So., Hopkins, Minn.; course at hotel	G	BC	Lab, Pt. Dem, LC, Sem, Lec, Pan, O, AV	10	10/15/57	10/16/57	C; 2 days	Unknown
Semi-Annual Postgraduate Extension Course—Anesthesiology and other Subjects	Department of Continuation Medical Education University of Minnesota Hospitals University of Minnesota Medical School 412 Delaware, Minneapolis; course at several points throughout the state	G	SCI	Sem, Lec, O	Arranged	Arranged		I; 10 2 hr. lectures	25 for entire series
A. Morris Ginsberg, M.D., Annual Memorial Lecture	Menorah Medical Center 4949 Rockhill Rd., Kansas City, Mo.	S	BC	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, EPP	12	Fall/57	Fall/57	C; 3 days	Nil
Postgraduate Seminar with Round Table Discussions	The University of Mississippi Medical Center 2500 N. State St., Jackson, Miss.	G	BC	WR, Sem, Lec, Pan, O, AV	6	1/22/58	1/22/58	C; 1 day	Nil
Sixth Annual Spring Postgraduate Assembly—Recent Advances in Medicine	University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	BC	Pt. Dem, WR, Sem, Lec, Pan, O, AV	18	4/ 9/58	4/11/58	C; 3 days	10 per day
Third Annual Trauma Day	University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	BC	Sem, Lec, Pan, O, AV	6	5/ 7/58	5/ 7/58	C; 1 day	10
The Management of Abdominal Disease	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	SCI	Pt. Dem, LC, Sem, O, TV	27	10/31/57	12/12/57	I; 6 sessions 4½ hr. weekly, Thursdays	12 a day or 60 for course
Two-Way Radio Conferences—Albany Medical College to Area Hospitals	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	CC(R)	Lec, O, Closed circuit Two-Way Radio	24	11/ 4/57	5/ 2/58	1 hr. weekly for 24 sessions	Nil
Obstetric-Pediatric Refresher Course	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	SCI	Pt. Dem, LC, WR, Sem, O	28	3/19/58	5/ 7/58	I; 8 sessions 3½ hr. weekly, Wednesdays	40
Clinical Refresher Course—Choice of Subject	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	SC	Pt. Dem, LC, WR	Arranged	Arranged		C; Arranged	60 for each 5 days
Postgraduate Course in General Practice	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	SC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	39	9/16/57	9/21/57	C; 6 days	75
Management of Infections	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Sem, Lec, Pan, O	14	10/ 2/57	10/ 3/57	C; 2 days	30
Occupational Medicine and Surgery	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	14	10/10/57	10/11/57	C; 2 days	30
Management of Trauma	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Pt. Dem, Sem, Lec, Pan, O, AV	14	1/ 8/58	1/ 9/58	C; 2 days	30
Postgraduate Medical Seminars	Glens Falls Hospital 100 Park St., Glens Falls, N. Y.	G	SCI	Pt. Dem, WR, Sem, Lec, Pan, O, AV	24	9/ 1/57	6/30/58	I; 8 sessions 3 hr. weekly, Thursdays	Nil
Psychotherapy in Everyday Practice	Meadowbrook Hospital Carman Ave. and Bethpage Turnpike, Hempstead, N. Y.	G	SCI	Sem, Lec, Pan	15	10/ 2/57	12/ 4/57	I; 10 sessions 1½ hr. weekly, Wednesdays	35
Infertility	Joint Committee on Postgraduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Cumberland Hospital, Brooklyn, N. Y.	G	SCI	Lec	16	10/57 4/58	12/57	I; 8 sessions 2 hr. weekly, Thursdays	30
Postgraduate Radio Program	The New York Academy of Medicine Two E. 103rd St., New York 29	G	HS(R)	Lec, Pan	52	9/57	9/58	I; 52 sessions 1 hr. weekly, Thursdays	Nil

Key will be found on page 1774.

GENERAL PRACTICE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Postgraduate Week—Research Contributions to Clinical Practice	The New York Academy of Medicine 2 E. 103rd St., New York 29	G	SC	Sem, Lec, Pan, AV	20	10/ 7/57	10/11/57	C; 5 days	10
Monthly Panel Meetings on Therapeutics for the General Physician	The New York Academy of Medicine 2 E. 103rd St., New York 29	G	SCI	Pan	Approx 10	11/12/57	4/ 8/58	I; 6 sessions 1½-1¾ hr. monthly, Tuesdays	Nil
Postgraduate course in the contagious and communicable diseases	New York Medical College Fifth Ave. at 106th St., New York 29	B	SCI	Lab, Pt. Dem, WR, Sem, Lec	120	11/ 6/57	5/28/58	I; 30 days	300
Comprehensive Course in Medicine	New York Polyclinic Hospital 345 W. 50th St., New York	B	SC	Lab, Pt. Dem, LC, WR, S, Sem, Lec, O, AV, TV	1200	9/57	6/58	C; 180 days	800
Course for General Practitioners	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, S, Lec, O, AV	132	4/ 1/58	4/30/58	C; 30 days	100
Proctology, Gastroenterology, with Operative Proctology (Cadaver) and Colorectal Surgery	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, S, Sem, Lec, AV	150	4/ 1/58	5/12/58	C; 36 days	200
Clinical Proctology and Gastroenterology (Combined Course)	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, Lec, AV	100	4/ 1/58	5/12/58	C; 36 days	100
555-A Electronics for Physicians	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, Dem, AV, O	15	9/ 3/57	11/12/57	I; 10 sessions 1½ hr. weekly, Tuesdays	75
747-A What's New for the Physician in Medicine, Pediatrics, Pyschiatry and Dermatology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, LC, Lec, Pan	102	9/17/57	5/27/58	I; 34 sessions 3 hr. weekly, Tuesdays	300
5434-A Review Course in General Medicine	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, LC, WR, Sem, Lec	70	7/ 8/58	7/19/58	C; 10 days	125
Recent Advances in Medicine	Rochester General Hospital West Side 501 W. Main St., Rochester, N. Y.	G	BCI	Lab, LC, Lec	8	3/ 6/58	3/27/58	I; 4 sessions 2 hr. weekly, Thursdays	10
Trauma	Sate University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	B	BC	Lec, Pan, O, AV	6	Spring/58		C; 1 day	Unknown
Asheville Postgraduate Medical Course	Office of Continuation Education University of North Carolina School of Medicine Chapel Hill, N. C.; course at Memorial Mission Hospital, Asheville, N. C.	B	SCI	Lec, O	18	9/19/57	10/31/57	I; 6 sessions 3 hr. weekly, Thursdays	20
Morganton Postgraduate Medical Course	Office of Continuation Education University of North Carolina School of Medicine Chapel Hill, N. C.; course at Grace Hospital, Morganton, N. C.	B	SCI	Lec, O	18	9/18/57	10/30/57	I; 6 sessions 3 hr. weekly, Wednesdays	20
Postgraduate Course in Obstetrics and Pediatrics	Bowman Gray School of Medicine Winston-Salem, N. C.	G	BC	Sem, Lec, O, AV	21	Spring/58		C; 3 days	Nil
Marriage Counselling by the General Physician	Dr. H. W. Neumann Southwestern Ohio Society of General Physicians, Seminar Series 1122 Carew Tower, Cincinnati; course at University of Cincinnati, College of Medicine, Cincinnati	G	BCI	Lec, Pan, O, AV	10	10/10/57	10/31/57	I; 4 days	10
Symposium on Selected Medical and Neurological Problems	Ohio Academy of General Practice 209 S. High St., Columbus, Ohio; course at Netherland Plaza Hotel, Cincinnati	G	BC	Sem, Pan, O	6	2/23/58	2/23/58	C; 1 day	Nil
Review of advances in the specialties as they apply to General Practice	Frank E. Bunts Educational Institute (Cleveland Clinic Foundation) 2020 E. 93rd Street, Cleveland	G	BC	Pt. Dem, Sem, Lec, Pan, O, AV	10	2/ 5/58	2/ 6/58	C; 2 days	20
Annual Postgraduate Seminar	Huron Road Hospital 13951 Terrace Rd., Cleveland 12	B	BC	Sem, Lec, O	17	Spring/58		C; 2 days	20
Medical and Surgical Emergencies	Ohio Academy of General Practice 209 S. High St., Columbus, Ohio; course at Commodore Perry Hotel, Toledo, Ohio	G	BC	Sem, Pan, O	6	11/20/57	11/20/57	C; 1 day	Nil
Postgraduate Course in Clinical Medicine	Commission on Graduate Education Pennsylvania Medical Society 230 State St., Harrisburg, Pa.; course at Selected Hospitals	G	SCI	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, EPP	60-90	Fall/57	Spring/58	I; 10-15 sessions 6 hr. weekly, Thursdays	60
New Knowledge in Medicine and Surgery	Commission on Graduate Education The Medical Society of the State of Pennsylvania 230 State St., Harrisburg, Pa.; course at U. S. Veterans Hospital, Pittsburgh	G	SCI	Lab, Pt. Dem, LC, Sem, Lec, Pan, O, AV	80	3/ 6/58	5/ 8/58	I; 10 sessions 8 hr. weekly, Thursdays	60
Advances in Medicine and Surgery	Graduate School of Medicine University of Pennsylvania Philadelphia	B	SC	Sem, Lec, Pan, O, AV	Unknown	9/16/57	9/21/57	C; 5 days	75 Non-Alumni, 50 Alumni,

Advances in Medicine and Surgery	Graduate School of Medicine University of Pennsylvania Philadelphia	B	SC	Sem, Lec, Pan, O, AV	Unknown	9/16/57	9/21/57	C; 5 days	75 Non-Alumni, 50 Alumni, 20 Incoming Students
The Jefferson Graduate Assembly	The Jefferson Medical College 1025 Walnut St., Philadelphia	G	BC	Pt. Dem, LC, Lec, Pan, AV	18	2/ 5/58	2/ 7/58	C; 3 days	15
1957 Postgraduate Course in Psychosomatic Medicine	Temple University Medical Center 3401 N. Broad St., Philadelphia 40	B	SCI	Pt. Dem, LC, Sem, Lec, Pan, O, EPP	80	10/ 2/57	2/26/58	I; 20 days	40
Refresher Course for General Practitioners	Albert Einstein Medical Center Northern Division York & Tabor Roads, Philadelphia	G	SCI	Pt. Dem, LC, WR, Sem, Pan, AV	90	3/ 5/58	7/11/58	I; 15 sessions 6 hr. weekly, Wednesdays	50
Management of Mass Casualties	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D. C.; course at Army Medical Service School Brooke Army Medical Center, Ft. Sam Houston, Tex.	G	SC	Sem, Lec, Pan, O, AV	40	9/23/57 11/18/57 2/24/58 3/24/58 6/ 2/58	9/27/57	C; 5 days	Nil
Sixth Postgraduate Conference in Medicine and Surgery	University of Texas Postgraduate School of Medicine 213 West Avenue G., Temple, Tex.; course at Scott and White Memorial Hospitals Scott, Sherwood, and Brindley Foundation Temple, Tex.	G	BC	Lab, Pt. Dem, LC, Sur, Sem, Lec, Pan, O, AV	27	3/ 3/58	3/ 5/58	C; 3 days	15
Postgraduate Course in General Practice	Arlington Hospital 5129-16th St., North, Arlington, Va.	G	SCI	Lec	8	1/ 8/58	2/26/58	I; 8 sessions 1 hr. weekly, Wednesdays	Nil
Advances in Therapy	University of Virginia Charlottesville, Va.	G	BCI	Sem, Lec, Pan	6 to 7	11/57 given 3 times yr.		I; 1 day	Unknown
Circuit Teaching Programs—Reviews in General Practice	State Medical Society of Wisconsin and Wisconsin Medical Schools; course at Lancaster, Racine, and Oconomowoc, Wis.; Janesville, Dells, Stevens Pt., Wis.; Monroe, Viroqua, Chippewa Falls, Wis.; Madison, Appleton, Sheboygan, Wis.	G	CC	Lec, O, AV	5	9/10/57 10/15/57 11/ 5/57 1/21/58	9/12/57 10/17/57 11/ 7/57 1/23/58	5 hr. one day at each location	10
Jackson Clinic—Marquette Postgraduate Program	Jackson Clinic 30 S. Henry St., Madison, Wis.	G	BC	Pt. Dem, Lec, Pan, O	4	9/23/57	9/23/57	C; 1 day	Nil
Postgraduate Course in General Practice	Dr. Robert C. Parkin, Assistant to the Dean University of Wisconsin Medical School 418 N. Randall Ave., Madison, Wis.	G	BC	Pt. Dem, LC, Lec, O	18	2/18/58	2/20/58	C; 3 days	25
Annual General Practice Symposium	Wisconsin Academy of General Practice 758 N. 27th St., Milwaukee; course at Hotel Schroeder, Milwaukee	G	BC	Lec, Pan, O	5	6/ 6/58	6/ 6/58	C; 1 day	Nil
				GERIATRICS					
Graduate Symposium on Geriatric Medicine	American Geriatrics Society 25 Mechanic St., Wakefield, Rhode Island course at Waldorf-Astoria Hotel, New York 22	G	BC	Pt. Dem, Lec, Pan, O, AV	16	11/ 7/57	11/ 8/57	C; 2 days	Nil
Geriatrics Conference	University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	BC	Sem, Lec, Pan, O	9	12/ 6/57	12/ 7/57	C; 1½ days	15
				GYNECOLOGY (See also Pathology and Surgery)					
Gynecological Pathology Review	Baptist Memorial Hospital 800 Miami Road, Jacksonville, Fla.	S	BCI	Lab, Lec, O, AV	9	3/ 7/58	5/ 2/58	I; 6 sessions 1½ hr. weekly, Wednesdays	Nil
Practical and Didactic Course in Office Gynecology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	BCI	Lab, Pt. Dem, LC, WR, Lec, O, EPP	16	9/ 4/57 11/ 6/57 1/ 8/58 2/26/58 4/30/58	9/25/57	I; 4 sessions 4 hr. weekly, Wednesdays	100
Course II in Office and Operative Gynecology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV, EPP	94	9/16/57 10/21/57 2/10/58 3/10/58 4/ 7/58 6/16/58	9/28/57	C; 13 days	150
Gynecology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BC	Pt. Dem, LC, Lec, Pan, O, AV, TV	18	11/ 4/57	11/ 6/57	C; 3 days	35
Gynecology for Specialists	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	S	SC	Pt. Dem, WR, Sem, Lec, Pan	40	7/58	7/58	C; 5 days	Unknown

Key will be found on page 1774.

GYNECOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Gynecology, Oncology and Female Urology	University of Maryland School of Medicine 522 W. Lombard St., Baltimore 1	G	SC	LC, WR, Lec	Unknown	Arranged		C; 10 wk.	125
Gynecology 3	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Massachusetts General Hospital, Boston	G	SC	Lab, Pt. Dem, LC, Lec, AV	78	9/ 9/57	9/20/57	C; 11 days	150
Gynecology 2	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Free Hospital for Women, Boston	G	SC	Lab, Pt. Dem, LC, WR, Lec, AV	120-130	Arranged		Arranged	150 a mo.
Gynecology for Specialists	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial, University of Minnesota Minneapolis 14	S	BC	Lec, O	15	3/20/58	3/22/58	C; 3 days	30
Gynecology	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Pt. Dem, LC, WR, Sur, Sem, Lec, Pan, O, AV	14	11/ 6/57	11/ 7/57	C; 2 days	30
Office Gynecology	Meadowbrook Hospital Carman Ave. and Bethpage Turnpike, Hempstead, N. Y.	G	SCI	Pt. Dem, LC, WR, Sem, Lec, Pan	6	10/17/57	11/21/57	I; 6 sessions 1 hr. weekly, Thursdays	10
Office Gynecology	Joint Committee on Postgraduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Hospital, Brooklyn, N. Y.	G	SCI	Lec	10	10/57	12/57	I; 10 sessions twice weekly, Mondays, Thursdays	20
567-A Gynecological Endocrinology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab, Pt. Dem, LC, Lec	35	10/ 7/57 4/ 7/58	10/11/57	C; 5 days	125
568-A Gynecological Cytology (for Specialists)	New York University Post-Graduate Medical School 550 First Ave., New York	S	SCI	Lab, Lec	32	10/ 1/57	11/21/57	I; 16 sessions 1 hr. Tuesdays and 3 hr. Thursdays	100
566-A Culdoscopy	New York University Post-Graduate Medical School 550 First Ave., New York	G	BCI	Pt. Dem, Lec	6	11/25/57 1/27/58 4/28/58	11/29/57	I; 2 hr. thrice weekly, Mondays, Wednesdays, Fridays	55
Gynecology	State University of New York Upstate Medical Center 706 Irving Ave., Syracuse, N. Y.	G	SC	WR, Lec, Pan, O, AV	40	4/21/58	4/25/58	C; 5 days	25

HEMATOLOGY

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Physiological Basis of Hematology	City of Hope Medical Center 1500 E. Duarte Rd., Duarte, Cal.	G	BC	Lab, Pt. Dem, LC, Lec, Pan, O, AV	19½	11/20/57	11/22/57	C; 3 days	10 per day or 25 for entire course
Recent Advances in Clinical Hematology	University of California Medical Center Los Angeles 24	G	BC	Lec, Pan, O, AV	Unknown	Fall/57	Unknown	C; 1½ days	Unknown
Clinical Hematology	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	SC	Lab, AV	48	7/58	7/58	C; 6 days	100
Clinical Hematology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O	20	3/19/58	5/21/58	I; 10 sessions 2 hr. weekly, Wednesdays	100
Hematology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	Unknown	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	30	6/16/58	6/20/58	C; 5 days	100
Anemia, Thrombocytopenic Purpura, Lymphomes, Acute & Chronic Leukemias	Indiana University School of Medicine 100 W. Michigan, Indianapolis	G	BC	Lec, Pan, O, AV	8	5/14/58	5/15/58	C; 2 days	10
Clinical Hematology	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	SCI	Lab, Pt. Dem, LC, WR, O, EPP	24	Arranged		I; 12 sessions arranged, Thursdays	30
Clinical Traineeship in Hematology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	MT	Lab, Pt. Dem, LC, WR, Sur, Sem, Lec, O, AV	Approx. 120	11/ 1/57 2/ 1/58 3/ 1/58	11/30/57	Approx. 30 days	50 per mo. for residents of Kansas; 100 per mo. for non-residents
Hematology	Tufts University School of Medicine Postgraduate Division 171 Harrison Ave., Boston	G	BC	Pt. Dem, Lec, Pan, AV	14	4/10/58	4/12/58	C; 3 days	20
Blood Dyscrasias	F. P. Rhoades, M.D., Michigan Academy of General Practice 970 Maccabees Bldg., Detroit; course at Sheraton-Cadillac Hotel, Detroit	G	BC	Sem, Lec, Pan, O, AV, TV	12	2/ 5/58	2/ 6/58	C; 2 days	Nil
Diseases of the Blood and	University of Michigan Medical School,	G	SC	Lab, Pt. Dem, Lec, O, AV	30	4/ 7/58	4/11/58	C; 5 days	50

Diseases of the Blood and Blood-forming Organs	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	SC	Lab, Pt. Dem, Lec, O, AV	30	4/ 7/58	4/11/58	C; 5 days	50
Medicine PM66 Clinical Hematology	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Lab, WR, Lec	54	9/10/57 1/28/58	1/21/58	I; 18 sessions 3 hr. weekly, Tuesdays	75
Medicine PM67 Advanced Hematology	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Lab, LC, Sem, Pt. Dem, EPP	34	9/17/57 2/ 4/58	1/ 7/58	I; 17 sessions 2 hr. weekly, Tuesdays	75
PM31 Clinical Hematology	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SCI	Lab, Pt. Dem, Lec	24	10/29/57	12/17/57	I; 8 sessions 3 hr. weekly, Tuesdays	50
PM30 Hematology Laboratory Methods	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SC	Lab, EPP	64	2/24/58	3/20/58	C; 16 days	200
PM32 Hematology, Lab. Methods in Blood Banks	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SCI	Lab	24	4/ 1/58	5/ 6/58	I; 6 sessions 4 hr. weekly, Tuesdays	50
Hematology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SCI	Lab	20	Arranged		I; 8 sessions 2½ hr. weekly, Tuesdays	50
5419-A Hematology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab, Lec	35	11/11/57	11/15/57	C; 5 days	85
5420-A Clinical Hematology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, Lec	20	4/ 8/58	5/29/58	I; 16 sessions 1-1½ hr. twice weekly, Tuesdays and Thursdays	45
Current Trends in Hematology	Frank E. Bunts Educational Institute (Cleveland Clinic Foundation) 2020 E. 93rd Street, Cleveland	G	BC	Pt. Dem, Sem, Lec, Pan, O, AV	12	10/23/57 Repeated on demand	10/24/57	2 days	20
Hematology Conference	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Pt. Dem, Lec	12	9/24/57	12/10/57	I; 12 sessions 1 hr. weekly, Tuesdays	20
Clinical Hematology	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Lec, AV	12	9/28/57	12/14/57	I; 12 sessions 1 hr. weekly, Saturdays	20
Hematology	Albert Einstein Medical Center Northern Division York & Tabor Rds., Philadelphia	G	SCI	Pt. Dem, LC, WR, Sem, Pan, O, AV	30	2/15/58	4/26/58	I; 10 sessions 3 hr. weekly, Fridays	35
Diseases of Blood and Blood Forming Organs	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	24	11/ 6/57	11/ 8/57	C; 3 days	50

INTERNAL MEDICINE

(See also Anesthesiology, Basic Sciences, Cardiovascular Disease, Electrocardiography, Endocrinology, Gastroenterology, Hematology, Neurology, Orthopedic Surgery, Peripheral Vascular Disease, Physical Medicine & Rehabilitation, Pulmonary Disease, and Radiology)

Impact of Newer Drugs Upon the Central Nervous System	City of Hope Medical Center 1500 E. Duarte Rd., Duarte, Cal.	G	BC	Lec, Pan, O, AV	13	2/10/58	2/11/58	C; 2 days	10 per day or 15 for entire course
Arthritis and Rheumatism	University of California Medical Center Los Angeles 24	G	BC	Lec	24	Fall/57	Unknown	C; 3 days	Unknown
Endocrinology and Metabolism	University of California Medical Center Los Angeles 24	G	BC	Lec, AV	Unknown	10/11/57	10/12/57	C; 2 days	Unknown
852: Bedside Clinics in Internal Medicine	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles; course at Los Angeles County Hospital, Los Angeles	G	SCI	Pt. Dem, LC, WR, Lec, Pan	24	10/10/57	1/16/58	I; 12 sessions 2 hr. weekly, Thursdays	65
Latest Advances in Internal Medicine	American College of Physicians 4200 Pine St., Philadelphia 4; course at University of Southern California School of Medicine, Los Angeles 33	S	SC	WR, Lec, Pan, O, AV	35-40	2/17/58	2/21/58	C; 5 days	30 A.C.P. members; 60 non-members
Internal Medicine	University of California Medical Center Second and Parnassus Aves., San Francisco	G	SC	Pt. Dem, WR, Lec, Pan, O	42	9/16/57	9/21/57	C; 6 days	20 per day or 100 for entire course

Key will be found on page 1774.

INTERNAL MEDICINE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Postgraduate Medicine Series—Sacramento	University of California Medical Extension 2nd and Parnassus Ave., San Francisco; course at Mercy Hospital, Sacramento, Cal.	G	BCI	Lec	6	9/25/57	11/20/57	I; 3 sessions 2 hr weekly, Wednesdays	15
Present Concepts in Internal Medicine	Department of the Army Office of the Surgeon General, Education and Training Division Washington 25, D. C.; course at Letterman Army Hospital, San Francisco	G	SC	Pt. Dem, LC, Sem, Lec, Pan, O, AV	35	10/28/57	11/ 2/57	C; 5 days	Nil
A Series of Postgraduate Medical Programs	U. S. Veterans Administration Hospital Fort Miley 42nd Ave. and Clement St., San Francisco 21	G	SCI	Lab, Pt. Dem, LC, Lec, Pan	12	4/58	5/58	I; 6 sessions 2 hr. weekly, Tuesdays	Unknown
Latest Advances in Internal Medicine	American College of Physicians 4200 Pine St., Philadelphia 4; course at University of California School of Medicine, San Francisco	S	SC	Lec, Pan, O, AV	40	6/16/58	6/20/58	C; 5 days	30 A.C.P. members; 60 non-members
Patho-Physiology of Renal Disease	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	SCI	Sem, Lec	15	9/57	12/57	I; 1½ hr. once weekly, for 11 wks.	10
General Applied Medical Science	Office of Postgraduate Medical Education University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20; course at Fitzsimons Army Hospital, Denver 20	G	SCI	Sem	Unknown	9/57	4/58	I; 1 hr. weekly, for 8 mo., Thursdays	10
Cardiac Physiology and Gastrointestinal Disease	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	SCI	Sem, Lec	Unknown	4/58	6/58	I; once weekly, for 12 wks.	10
Advances in Medicine as Related to Current Research	New England Institute for Medical Research Grove St., Ridgefield, Conn.	B	SCI	Lab, Sem, Lec, O	12	10/17/57	11/21/57	I; 6 sessions 2 hr. weekly, Thursdays	15
Diabetes	Florida State Board of Health—Bureau of Special Health Services P. O. Box 210, Jacksonville, Fla.; course at University of Florida Medical School, Gainesville, Fla.	G	BC	Sem, Lec, Pan, O, AV	15	Oct/57		C; 2 days	Nil
Seminar on Diabetes Mellitus	University of Florida College of Medicine J. Hillis Miller Health Center, Gainesville, Fla.	B	BC	Lec, Pan, O, AV	10	10/57	10/57	C; 2 days	10
Professor Pro Tempore in Medicine	Mount Sinai Hospital of Greater Miami 4300 Alton Rd., Miami Beach, Fla.	B	MT	Pt. Dem, LC, WR, Lec, Pan, O, AV	18	9/57 (2nd wk.)	end of wk.	6 sessions 3 hr. each	Nil
Renal Disease in Internal Medicine	Emory University School of Medicine Atlanta, Ga.	G	BC	Lec, Pan, O, AV	Approx 16	3/58		C; 2 days	25
Asthma, Hay Fever and Allied Diseases	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	140	1st Monday of each mo.	4 wk later	C; 24 days	200
Asthma, Hay Fever and Allied Diseases	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	500	Arranged		C; 6 mo. full time	500
The Diagnosis and Treatment of Congenital and Rheumatic Heart Disease in Infants and Children	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O	24	9/18/57 3/19/58	12/ 4/57	I; 12 sessions 2 hr. weekly, Wednesdays	100
Clinical Medicine at the Bedside	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O	20	9/18/57 3/19/58	11/20/57	I; 10 sessions 2 hr. weekly, Wednesdays	100
Arthritis	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O	20	9/20/57 3/21/58	11/22/57	I; 10 sessions 2 hr. weekly, Fridays	100
Course II In General Review of Internal Medicine	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	80	9/23/57 4/28/58	10/ 5/57	C; 12 days	125
Differential Diagnosis	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O	20	3/19/58	5/21/58	I; 10 sessions 2 hr. weekly, Wednesdays	100
Diabetes Mellitus	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Lec, Pan, O, AV	8	4/16/58	4/17/58	C; 2 days	10
Internal Medicine	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	28	11/11/57	11/14/57	C; 4 days	50
Cardiac Auscultation	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BC	Pt. Dem, Sem, Lec, Pan, O, AV, EPP	14	3/17/58	3/18/58	C; 2 days	50
Topics in Clinical Medicine	Johns Hopkins Hospital 601 N. Broadway, Baltimore	B	SC	Lab, Pt. Dem, LC, WR, Lec, Pan, O, AV	40	5/12/58	5/18/58	C; 5½ days	100
Review of Recent Advances in Internal Medicine	American College of Physicians 4200 Pine St., Philadelphia 4; course at New England Center Hospital, Boston	S	SC	Lec, Pan, O, AV	40-45	10/28/57	11/ 2/57	C; 5½ days	30 A.C.P. members; 60 non-members
Diabetes and Endocrinology in Relation to General Medicine	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at New England Deaconess Hospital,	G	BC	Pt. Dem, Lec	21	9/ 9/57	9/11/57	C; 3 days	30

Diabetes and Endocrinology in Relation to General Medicine	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at New England Deaconess Hospital, Boston	G	BC	Pt. Dem, Lec	21	9/ 9/57	9/11/57	C; 3 days	30
Thyroid Disease and the Use of Radioactive Iodine	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Massachusetts General Hospital and Beth Israel Hospital, Boston	S	SC	Lab, Pt. Dem, LC, Lec	140	7/ 7/58	8/ 1/58	C; 20 days	300
Internal Medicine 3	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Massachusetts General Hospital, Boston	G	SC	Pt. Dem, Lec, Pan, O	180	6/16/58	7/26/58	C; 35 days	250
Review of Recent Advances in Internal Medicine	Tufts University School of Medicine Postgraduate Division 171 Harrison Ave., Boston	S	SC	Pt. Dem, Lec, Pan, AV	40	10/28/57	11/ 2/57	C; 5½ days	50
Fluid and Electrolyte Disturbances	Tufts University School of Medicine Postgraduate Division 171 Harrison Ave., Boston	G	BC	Pt. Dem, Lec, Pan, AV	14	1/ 9/58	1/11/58	C; 3 days	20
Clinical Internal Medicine	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	SCI	Pt. Dem, Sem, Lec, O, AV	67	10/ 3/57	3/13/58	I; 21 sessions 3½ hr. weekly, Thursdays	65
Postgraduate Seminars	Highland Park General Hospital 369 Glendale, Highland Park, Mich.	G	SCI	LC, Sem, Lec, AV	20	10/15/57	3/15/58	I; 20 sessions 1 hr. weekly	Nil
Metabolism and Endocrinology	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	SC	Pt. Dem, Lec, O, AV	30	3/31/58	4/ 4/58	C; 5 days	50
Recent Advances in Therapeutics	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	SC	Pt. Dem, Lec, O, AV	30	5/ 5/58	5/ 9/58	C; 5 days	50
Internal Medicine for Internists	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota Minneapolis 14	S	BC	Lec, O	15	3/17/58	3/19/58	C; 3 days	30
The Newer Drugs in General Practice	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota Minneapolis 14	G	BC	Lec, O	15	1/ 6/58	1/ 8/58	C; 3 days	30
Postgraduate Seminar (General Subjects)	The University of Mississippi Medical Center 2500 N. State St., Jackson, Miss.	G	BC	Lab, WR, Sem, Lec, Pan, O, AV	12	10/24/57	10/25/57	C; 2 days	10
Diabetes and Basic Metabolic Problems	American Diabetes Assoc., Inc. 1 E. 45th St., New York; course at Academy of Medicine Fulton County Medical Society, Atlanta, Ga.	G	BC	Sem, Lec, Pan, O, AV	20	1/22/58	1/24/58	C; 3 days	40 Assoc. members; 75 Non-members
Recent Advances in Internal Medicine and Clinical Physiological Seminars	St. Michael's Hospital 306 High St., Newark, N. J.	G	SCI	Lab, Pt. Dem, LC, Sem, O	20	9/18/57	4/ 2/58	I; 10 sessions 2 hr. weekly, Wednesdays	25
Recent Advances in Internal Medicine and Therapeutics	Middlesex General Hospital 180 Somerset St., New Brunswick, N. J.	G	SCI	Lec	72	10/16/57	6/25/58	I; 36 sessions 2 hr. weekly, Wednesdays	100 (interns and residents of outside hospitals 25)
Fevers and Infections: Their Diagnosis and Treatment	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	BCI	Pt. Dem, LC, Sem, O, TV	18	4/ 3/58	4/24/58	I; 4 sessions 4½ hr. weekly Thursdays	12 a day or 40 for course
Arthritis	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Pt. Dem, LC, Sem, Lec, Pan, O, AV	14	2/19/58	2/20/58	C; 2 days	30
Physical Diagnosis and Recent Advances in Internal Medicine	Meadowbrook Hospital Carman Ave. and Bethpage Turnpike, Hempstead, N. Y.	G	SCI	Pt. Dem, LC, WR	20	9/19/57	11/21/57	I; 10 sessions 2 hr. weekly, Thursdays	20
Medicine PM74	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Pt. Dem, LC, WR, Sem, Lec, EPP	72	9/24/57 2/ 4/58	1/28/58	I; 18 sessions 4 hr. weekly, Tuesdays	150
PM81 Medicine-Arthritis	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Hospital for Joint Diseases, New York 35	G	BC	LC, Lec	19½	10/25/57 3/ 5/58	10/27/57	C; 3 days	100
Medicine PM 49 Office Management of Diseases of Metabolism	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	BC	Lec	14	11/ 1/57	11/ 2/57	C; 2 days	50

Key will be found on page 1774.

INTERNAL MEDICINE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Rheumatic and Congenital Heart Disease	Joint Committe on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Hospital and Jewish Chronic Disease Hospital, Brooklyn, N. Y.	G	SCI	Lec	12	9/57 4/58	12/57	I; 12 sessions 1 hr. weekly, Fridays	20
Recent Advances in Internal Medicine	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Kings County Hospital, Brooklyn, N. Y.	G	SCI	Lec	15	10/57	12/57	I; 10 sessions 1½ hr. weekly, Wednesdays	30
Management of Diabetes Mellitus and its Complications	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Chronic Disease Hospital, Brooklyn, N. Y.	G	SCI	Lec	8	10/57 4/58	12/57	I; 8 sessions 1 hr. weekly, Thursdays	20
Internal Medicine	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SC	Lab, Pt. Dem	40 a week	Arranged		C; 20 days	150 for 1 mo. 300 for 2 mo.
Parasitology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SC	Lab, Sem, Lec	120	Arranged		C; 30 days	75
Physical Diagnosis—Lungs, Heart, Abdomen	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	B	SCI	Pt. Dem	20	Arranged		I; 8 sessions Tuesdays	100
Arthritis	New York Polyclinic Hospital 345 W. 50th St., New York	G	SCI	Lab, Pt. Dem, LC, WR, Sem, Pan, Lec, O, AV	8	Arranged		I; 8 sessions arranged	50
General Medicine	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, Lec, AV	192	4/ 1/58	4/30/58	C; 28 days	100
5435-A Clinical Internal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	LC, WR		9/ 5/57 1/ 2/58 3/ 6/58	3-9 mo.	I; 4 hrs. weekly, Thursdays	60 for 3 mo.
5437-A Normal and Pathological Physiology: Fuctional and Chemical Aspects	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lec, Pt. Dem, O, AV	70	9/16/57	9/27/57	C; 10 days	125
5413-A Auscultation of the Heart	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Pt. Dem, Lec	21	10/14/57 2/24/58	10/16/57	C; 3 days	55
5414-A Cardiac Roentgenology	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Pt. Dem, Lec, AV	14	10/17/57 2/27/58	10/18/57	C; 2 days	35
5433-A Problems in Clinical Medicine	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, LC, WR	75	11/ 1/57	4/25/58	I; 25 sessions 3 hr. weekly, Fridays	75
5424-A Diabetes Mellitus, Hyperinsulinism and Hypoglucemia	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Lec, Pt. Dem, O, AV	21	11/11/57	11/13/57	C; 3 days	40
543-A Arthritis and Allied Rheumatic Disorders	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, Lec	35	11/11/57	11/15/57	C; 5 days	85
5439-A Recent Advances in the Diagnosis and Treatment of Poisonings	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Lab, Lec	21	12/ 2/57	12/ 4/57	C; 3 days	60
544-A Arthritis and Related Disorders	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, Lec	35	2/11/58	3/11/58	I; 5 sessions 7 hr. weekly, Tuesdays	85
5429-A Treatment of Renal Failure and Hypertension	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, Dem, AV, Pt. Dem	24	4/ 7/58	5/26/58	I; 8 sessions 3 hr. weekly, Mondays	35
541-A Seminar in Internal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, Sem, Lec	280	4/ 7/58	5/29/58	C; 40 days	250
542-A Arthritis and Allied Rheumatic Disorders	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, Lec	24	4/ 8/58	5/27/58	I; 8 sessions 3 hr. weekly, Tuesdays	55
5428-A Diseases of the Liver and Biliary Tract	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, Lec	16	4/ 9/58	5/28/58	I; 8 sessions 2 hr. weekly, Wednesdays	40
5438-A Normal and Pathological Physiology: Functional and Chemical Aspects	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, Pt. Dem, O, Dem	16	4/ 9/58	5/28/58	I; 8 sessions 2 hr. weekly, Wednesdays	50
5421-A Problems in Diagnosis	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, LC, Lec	12¼	4/11/58	5/23/58	I; 7 sessions 1¾ hr. weekly	35
5432-A Symposium on Modern Therapeutics in Internal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lec, AV, Pt. Dem, O	70	6/ 9/58	6/20/58	C; 10 days	100

5421-A Problems in Diagnosis	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, LC, Lec	12¼	4/11/58	5/23/58	I; 7 sessions 1¾ hr. weekly Wednesdays	35
5432-A Symposium on Modern Therapeutics in Internal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lec, AV, Pt. Dem, O	70	6/ 9/58	6/20/58	C; 10 days	100
5430-A The Management of Chronic Kidney Disease	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Lec, Pt. Dem, AV, O	14	6/23/58	6/24/58	C; 2 days	35
5431-A The Management of Hypertension	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Lec, Pt. Dem, O, AV	14	6/25/58	6/26/58	C; 2 days	35
5436-A Tutorial Course in Internal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab, Pt. Dem, LC, WR, Lec		Arranged min. 4 months		C; Arranged	125 per mo.
Internal Medicine	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	G	SCI	Sem, Lec, O, AV	21	10/ 3/57	11/ 7/57	I; 7 sessions 3 hr. weekly, Thursdays	15
Postgraduate Course in Mycology	Duke University School of Medicine Durham, N. C.	G	SC	Lab, Pt. Dem, LC, WR, Lec, Pan	84	7/ 1/58	7/31/58	C; 24 days	100
Duke Medical Postgraduate Course	Duke University School of Medicine Durham, N. C.	G	BC	Lab, Pt. Dem, LC, WR, Lec, Pan	28	6/16/58	6/19/58	C; 4 days	25
Annual Sessions in Rheumatic Diseases	Ohio State University Columbus 10, Ohio	G	BC	Lab, Pt. Dem, LC, WR, Lec, Pan, O	14	10/24/57	10/25/57	C; 2 days	Nil
Applied Therapeutics	University of Oregon Medical School 3181 S.W. Sam Jackson Park Rd., Portland, Ore.	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	28	10/28/57	10/31/57	C; 4 days	40
Therapy of the Cardiac Patient	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	B	SCI	Sem, Lec, Pan, AV	30	Fall/57		I; 10 sessions 3 hr. weekly	75
Rheumatic Diseases and Allied Conditions	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Lec, Pan, AV	24	9/26/57	12/19/57	I; 12 sessions 2 hr. weekly, Thursdays	40
Metabolic Diseases	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Lec	10	10/ 7/57	12/ 9/57	I; 10 sessions 1 hr. weekly, Mondays	20
Renal Disease	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Lec, AV	10	2/ 3/58	4/ 7/58	I; 10 sessions 1 hr. weekly, Mondays	20
Diabetes and Hypoglycemia	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	BC	Lab, Pt. Dem, Sem, Lec, Pan, O, AV	Unknown	3/24/58	3/26/58	C; 3 days	75
Pathologic Physiology for Clinicians	American College of Physicians 4200 Pine St., Philadelphia; course at University of Pittsburgh School of Medicine, Pittsburgh	S	SC	Lec, Pan, O, AV	40-45	10/ 7/57	10/12/57	C; 5½	30 A.C.P. members; 60 non-members
Fluid and Electrolyte Balance	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	24	3/19/58	3/21/58	C; 3 days	50
Recent Advances in Internal Medicine	University of Tennessee College of Medicine 62 S Dunlap, Memphis, Tenn.	G	SC	Pt. Dem, WR, Lec, Pan, O, AV	40	5/26/58	5/30/58	C; 5 days	75
Seminar on heart sounds and murmurs in Internal Medicine	University of Vermont College of Medicine Burlington, Vt.	G	BC	Pt. Dem, Sem, Lec, Pan, O	10	10/17/57	10/18/57	C; 2 days	10 for non-residents of Vermont
Clinical Cardiopulmonary Physiology in Internal Medicine	University of Vermont College of Medicine Mary Fletcher Hospital, Burlington, Vt.	S	SC	Lab, Pt. Dem, LC, Sem, Pan, O, EPP	44	12/ 2/57	12/ 7/57	C; 5½ days	30
Basic Concepts in Internal Medicine	American College of Physicians 4200 Pine St., Philadelphia 4; course at Richmond Academy of Medicine, Richmond	S	SC	Lec, Pan, O, AV	35-40	10/14/57	10/18/57	C; 5 days	30 A.C.P. members; 60 non-members
Fluid and Electrolyte Balance	University of Washington School of Medicine Seattle 5	G	BC	Lab, Pt. Dem, Lec, Pan, AV, EPP	21	9/15/57	9/18/57	C; 4 days	45
Contemporary Developments in Internal Medicine	University of Washington School of Medicine Seattle 5	G	SC	Pt. Dem, Sem, O	40	11/11/57	11/15/57	C; 5 days	50
Biologic & Physiologic Bases of Internal Medicine	American College of Physicians 4200 Pine St., Philadelphia; course at University of Wisconsin Medical School, Madison, Wis.	G	SC	Pt. Dem, LC, Lec, O	25	10/21/57	10/25/57	C; 5 days	25
Biological Approaches to Internal Medicine	American College of Physicians 4200 Pine St., Philadelphia 4; course at University of Wisconsin Medical School, Madison, Wis.	S	SC	Lec, Pan, O, AV	35-40	10/21/57	10/25/57	C; 5 days	30 A.C.P. members; 60 non-members

Key will be found on page 1774.

MALIGNANT DISEASE

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Recent Advances in the Diagnosis and Treatment of Cancer	City of Hope Medical Center 1500 East Duarte Rd., Duarte, Cal.	G	BC	Pt. Dem, LC, Lec, Pan, O, AV	19½	5/13/58	5/15/58	C; 3 days	10 per day or 25 for entire course
Postgraduate Crossroad Seminar	Florida State Board of Health—Bureau of Special Health Services P.O. Box 210 Jacksonville, Fla.; course given in 8 Florida cities	G	BC	Sem, Lec, Pan, O, AV	4	between 10/1/57 and 10/11/57		C; 1 day each in 8 Florida cities	Nil
Cancer Symposium (11th Annual)	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Lec, Pan, O, AV	8	3/26/58	3/26/58	C; 1 day	Nil
Tumor Conference	State University of Iowa College of Medicine University Hospital, Iowa City	G	BC	Pt. Dem, WR, Lec, Pan, O, AV, TV	14-16	12/11/57	12/12/57	C; 2 days	25
Cancer	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	14	1/22/58	1/23/58	C; 2 days	30
Diagnosis and treatment of head and neck cancer	Queens General Hospital 82-68 164th St., Jamaica 32, N.Y.	S	SCI	Lab, Pt. Dem, LC, WR, Sur, Sem, Lec, Pan, O	96	9/57	12/57	I; twice weekly	300
Lectures on Cancer Research	Queens General Hospital 82-68 164th St., Jamaica 32, N.Y.	G	SCI	Lec	12	9/57	10/57	I; 8 days	25
Medicine PM72	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Pt. Dem, WR, Lec, AV, EPP	76	9/10/57 1/28/58	1/21/58	I; 19 sessions 4 hr. weekly, Tuesdays	150
Course in Early Cancer—Diagnosis and Management	Memorial Center for Cancer and Allied Diseases 444 E. 68th St., New York 21	G	BC	Pt. Dem, LC, Lec, Pan, O, AV, EPP	24	10/23/57	10/25/57	C; 3 days	40
Tumors of Childhood	Memorial Center 444 E. 68th St., New York	B	SCI	Pt. Dem, LC, WR, Lec, AV	16	9/57 11/57 1/58 4/58	11/57	I; 8 sessions 2 hr. weekly, Fridays	Nil
Tumors, benign and malignant, lymphomas, leukemias and related diseases in the juvenile age group	Memorial Center 444 E. 68th St., New York	B	BC	Pt. Dem, LC, WR, Lec, AV	24	4/58		C; 3 days	35
Chemotherapy of Cancer	Dr. C. P. Rhoads, Sloan-Kettering Institute 420 E. 68th St., New York 21; course at Memorial Center for Cancer and Allied Diseases, New York 21	S	SC	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	140	9/30/57	10/25/57	C; 4 wk.	Nil
Malignant Diseases	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	B	SCI	Pt. Dem, LC, Lec, Pan, O, AV	18	Spring/58	Unknown	I; 6 sessions 3 hr. weekly, Thursdays	15
Diagnosis and Treatment of Malignant Neoplasms	University of Oregon Medical School 3181 S.W. Sam Jackson Park Rd., Portland 1, Ore.	B	SC	Pt. Dem, LC, Sem, Lec, Pan, O, AV	32	9/23/57	9/27/57	C; 5 days	25
Diagnosis and Treatment of Malignant Diseases	Dr. Robert C. Parkin, Assistant to the Dean University of Wisconsin Medical School 418 N. Randall Ave., Madison, Wis.	G	BC	Pt. Dem, LC, Lec, O	18	1/21/58	1/23/58	C; 3 days	25

NEUROLOGY

Clinical Neurology	Cook County Graduate School of Medicine 707 South Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O	30	9/18/57 3/19/58	11/21/57	I; 10 sessions 3 hr. weekly, Wednesdays	100
The Neuromuscular Diseases of Children with Special Emphasis on Cerebral Palsy	Cook County Graduate School of Medicine 707 South Wood St., Chicago	S	SC	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, EPP	80	7/ 7/58	7/18/58	C; 11 days	250
Demonstration of Technique and Interpretation of a Neurological Examination and Ancillary Diagnostic Procedures and the Convulsive Disorders	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Lab, Pt. Dem, Lec, Pan, O, AV	8	11/13/57	11/13/57	C; 1 day	10
Neurology and Neurosurgery	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	14	2/26/58	2/27/58	C; 2 days	30
Neurology	Tufts University School of Medicine Postgraduate Division 171 Harrison Ave., Boston	G	BC	Pt. Dem, Lec, Pan, AV	6	4/30/58	5/ 3/58	C; 4 days	20
Neurological Medicine	Harvard Medical School Courses for Graduates 25 Shattuck St., Boston; course at Boston City Hospital, Boston	S	SC	Pt. Dem, LC, Lec, O	38	6/ 2/58	6/ 7/58	C; 6 days	100
Clinical Neurology	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	BC	Pt. Dem, Lec, AV	12	5/ 7/58	5/ 8/58	C; 2 days	25
Neurology for General Physicians and Specialists	Robert B. Howard, M.D. Continuation Medical Education	G	SC	Lec, O	33	2/10/58	2/15/58	C; 6 days	50

Clinical Neurology	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	BC	Pt. Dem, Lec, AV	12	5/ 7/58	5/ 8/58	C; 2 days	25
Neurology for General Physicians and Specialists	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota Minneapolis 14	G	SC	Lec, O	33	2/10/58	2/15/58	C; 6 days	50
Recent Advances in Neurology	St. Michael's Hospital 306 High St., Newark, N. J.	G	SCI	Pt. Dem, Lec, O	12	10/30/57	1/22/58	I; 6 sessions 2 hr. weekly, Wednesdays	25
Neurology in Adult and Pediatric Practice	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	14	10/23/57	10/24/57	C; 2 days	Unknown
Lecture Course in Neurology	Meadowbrook Hospital Carman Ave. and Bethpage Turnpike, Hempstead, N. Y.	G	SCI	Sem, Lec	6	10/ 2/57	11/ 6/57	I; 6 sessions 1 hr. weekly, Wednesdays	15
Neurology PM60 Review	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	S	SCI	Pt. Dem, Sem, Lec	48	11/ 4/57	11/30/57	I; 16 sessions 3 hr. 4 times weekly, Mondays, Wednesdays, Fridays, Saturdays	150
PM30 Clinical Neurology	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SC	LC, Sem, Lec	30	3/31/58	4/ 4/58	C; 6 days	75
Neurology PM60 Advanced	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SC	Lab, Pt. Dem, LC, WR	35 a wk.	Every 3 mo. period		C; 3 mo.	150
Neurology PM61 Advanced	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 29	S	SC	Pt. Dem, Sem, Lec	3 mo. full time	Arranged		3 mo. arranged	150
Review of Neurology	Dr. Geoffrey F. Osler Goldwater Memorial Hospital Welfare Island, New York	S	SCI	Lab, Pt. Dem, LC, Lec, AV	100	9/18/57	12/13/57	I; 40 sessions 2 and 3 hr. weekly	175
Neurology-Psychiatry Lectures	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Lec	30	9/24/57	4/29/58	I; 30 sessions 1 hr. weekly, Tuesdays	50
NEUROLOGY AND PSYCHIATRY									
Postgraduate Seminar in Neurology and Psychiatry	Metropolitan State Hospital 475 Trapelo Rd., Waltham, Mass.	S	SCI	Lab, Lec, O, AV	30	10/11/57	11/15/57	I; 12 sessions 2¼ hr. twice weekly, Fridays Saturdays	Nil
Psychiatry and Neurology	University of Nebraska College of Medicine 42nd and Dewey, Omaha; course at Nebraska Psychiatric Institute	G	BC	Pt. Dem, Sem, Lec, Pan, O, AV, TV	6	9/12/57	9/12/57	C; 1 day	10
Psychiatry PM 1	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32 and at New York State Psychiatric Institute New York	S	SC	Lab, Pt. Dem, LC, Sem, Lec	400	10/ 7/57	12/13/57	C; 50 days	300
647-A Psychiatry and Neurology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, LC, Lec	420	9/16/57	12/ 6/57	C; 12 weeks	300
644-A Neuroanatomy and Neurophysiology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, Lec	126	9/16/57	12/ 6/57	I; 36 sessions 3½ hr. weekly, Wednesdays	250
OBSTETRICS									
Postgraduate Obstetric-Pediatric Seminar (formerly Tri-State Obstetric Seminar)	Florida State Board of Health—Bureau of Maternal and Child Health P. O. Box 210, Jacksonville, Fla.; course at Daytona Plaza Hotel, Daytona Beach, Fla.	G	BC	Sem, Lec, Pan, O, AV	15	9/ 9/57	9/11/57	C; 3 days	Nil
General and Surgical Obstetrics	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	50	9/18/57 3/19/58	11/20/57	I; 10 sessions 5 hr. weekly, Wednesdays	150
Course I in Obstetrics	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	75	9/30/57 11/ 4/57 2/24/58 3/24/58 5/ 5/58	10/12/57	C; 12 days	150

Key will be found on page 1774.

OBSTETRICS—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Clinical Obstetrics	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Boston Lying-in Hospital, Boston	G	SC	Pt. Dem, LC, WR, Lec, O	120-130	10/ 1/57 11/ 1/57 4/ 1/58 5/ 1/58	10/31/57	C; 27 days	150
Obstetrics for General Physicians	Robert B. Howard, M.D., Continuation Medical Education 1342 Mayo Memorial, University of Minnesota, Minneapolis 14	G	BC	Lec, O	15	10/ 7/57	10/ 9/57	C; 3 days	30
Obstetrics	University of Nebraska College of Medicine 42nd and Dewey, Omaha; course at Lincoln General Hospital, Lincoln, Neb.	G	BC	Sem, Lec, Pan, O, AV	6	4/24/58	4/24/58	C; 1 day	10
Obstetrics	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Pt. Dem, LC, WR, Sur, Sem, Lec, Pan, O, AV, EPP	14	3/ 5/58	3/ 6/58	C; 2 days	30
PM80—Obstetrics—Traineeship	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Margaret Hague Maternity Hospital, Jersey City, N. J.	G	MT including housing and maintenance	LC, WR, Lec		First of each mo.		three mo.	350
PM81—Obstetrics—Observation Course	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Margaret Hague Maternity Hospital, Jersey City, N. J.	G	SC	LC, Lec		First of each mo.		C; 1 mo full time	100
Manikin Obstetrics	New York Polyclinic Hospital 345 W. 50th St., New York	G	SCI	Pt. Dem, Cad, Sem, Lec, AV	24	4/ 1/58	5/13/58	I; 12 sessions 2 hr. weekly, Saturdays	150
564-A Infertility	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Lab, Pt. Dem, Lec	21	12/ 2/57	12/ 4/57	C; 3 days	45
Obstetrics	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	G	SC	Pt. Dem, LC, WR, Sem, Lec, AV	40	Arranged		C; 5 days	25

OBSTETRICS & GYNECOLOGY
(See also Pathology)

Obstetrics and Gynecology	University of California Medical Center Second and Parnassus Aves., San Francisco	G	BC	Lec, Pan	24	9/11/57	9/14/57	C; 4 days	Unknown
Gynecology and Obstetrical Pathology	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	S	SCI	Lab, Lec, O, AV, EPP	50	9/ 4/57	8/27/58	I; 50 sessions, 1 hr. weekly, Wednesdays	Varies
Advances in Obstetrics and Gynecology	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	G	BC	Sem, Lec, Pan, O, AV	12	3/12/58	3/13/58	C; 2 days	20
Obstetrics and Gynecology	State University of Iowa College of Medicine University Hospital, Iowa City	G	BC	Pt. Dem, Lec, Pan, O, AV	10-12	11/ 8/57	11/ 9/57	C; 1½ days	20 (no charge for members of the Iowa Ob. and Gyn. Society)
Gynecology and Obstetrics	University of Maryland School of Medicine 522 W. Lombard St., Baltimore 1	G	SC	LC, WR, Lec	12 wk.	Arranged		C; 12 wk.	150
Pathology of Obstetrics and Gynecology	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Free Hospital for Women, Boston	S	SCI	Lab, Lec	144	1/ 2/58	5/ 8/58	I; Unknown	150
Obstetrics and Gynecology	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	BC	Pt. Dem, Lec, O, AV	18	1/29/58	1/31/58	C; 3 days	30
Obstetrics and Gynecology	University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	BC	WR, Sem, Lec, Pan, O, AV	12	1/16/58	1/17/58	C; 2 days	10 per day
Gynecological and Obstetrical Pathology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Kings County Hospital, Brooklyn, N. Y.	S	SCI	Lab, Lec	30	3/58	5/58	I; 10 sessions 3 hr. weekly, Fridays	100
Gynecology and Obstetrics including manikin obstetrics and operative gynecology (cadaver)	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR Sur, Sem, Lec, AV, Cad	400	4/ 1/58	5/31/58	C; 56 days	250
Culdoscopy	New York Polyclinic Hospital 345 W. 50th St., New York	G	BCI	Lab, Pt. Dem, LC, Sem, Lec, AV	6	Arranged		I; 3 sessions 2 hr. thrice weekly, Mondays,	100

and operative gynecology (cadaver)				Sur, Sem, Lec, AV, Cad					
Culdoscopy	New York Polyclinic Hospital 345 W. 50th St., New York	G	BCI	Lab, Pt. Dem, LC, Sem, Lec, AV	6	Arranged		I; 3 sessions 2 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
5610-A X-Ray Diagnosis in Obstetrics and Gynecology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, Lec	35	10/21/57	10/25/57	C; 5 days	85
Obstetrics and Gynecology	Southern Pediatric Seminar Saluda, N. C.	G	SC	Sem, Lec, Pan	40	7/21/58	7/26/58	C; 6 days	35
Post-Graduate Refresher Course for General Practitioners	Hahnemann Medical College and Hospital 230 N. Broad St., Philadelphia	G	SCI	Lec, Pan, AV, O	24	9/25/57	12/11/57	I; 12 sessions, 2 hr. weekly, Wednesdays	50
Physiology of Reproduction	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Lec, AV	30	10/ 2/57	5/14/58	I; 30 sessions 1 hr. weekly, Wednesdays	30
Obstetrics—Gynecology	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	24	10/23/57	10/25/57	C; 3 days	50
		OCCUPATIONAL MEDICINE (See also General Practice)							
Aviation Medicine	University of California Medical Center Los Angeles 24	G	BC	Lec, Pan, O, AV	18	10/31/57	11/ 2/57	C; 3 days	Unknown
Occupational Medicine 202	Columbia University School Public Health and Administrative Medicine 600 W. 168th St., New York 32	G	SCI	Lec	16	2/ 3/58	3/29/58	I; 8 sessions 2 hr. weekly, day to be arranged	30
Occupational Medicine 207 Public Health Aspects of Radiation	Columbia University School Public Health and Administrative Medicine 600 W. 168th St., New York 32	G	SCI	Lec	18	3/31/58	5/29/58	I; 9 sessions 2 hr. weekly, to be arranged	30
Occupational Medicine 208 Industrial Medical Organization	Columbia University School Public Health and Administrative Medicine 600 W. 168th St., New York 32	G	SCI	Lec	Arranged	3/31/58	5/29/58	I; 9 sessions to be arranged	30
488-A Occupational Medicine for Physicians	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Sem, Lec, Pan	280	9/16/57	11/ 8/57	C; 40 days	350
482-A Industrial Hygiene	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, Lec	Unknown	9/57		I; 15 days	90
4810-A Industrial Toxicology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, Dem, AV	Unknown	9/57		I; Unknown	90
4811-A Special Topics in Industrial Hygiene Laboratory Methods	New York University Post-Graduate Medical School 550 First Ave., New York	G	Unknown	Lab	Unknown	Arranged		Arranged	Arranged
484-A Medical Aspects of Compensation	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Sem, Lec, Pan	35	10/21/57	10/25/57	C; 5 days	45
486-A Air Pollution	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lec, Dem, AV, EPP	70	12/ 2/57	12/13/57	C; 10 days	90
480-A Introduction to Radiological Safety	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	AV, Dem, Lec	70	1/ 6/58 2/58	1/17/58	C; 10 days	90
480-B Radiological Safety Laboratory	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab	70	1/20/58 2/58	1/31/58	C; 10 days	90
482-B Industrial Hygiene Laboratory	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab		2/58		I; Unknown	90
489-A Chemical Methods in Industrial Hygiene	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab	Unknown	2/58		I; Unknown	90
Bureau of School Health Pre-Service Training Course	Dr. Robert W. Culbert, Director Department of Health 125 Worth St., New York 13; course at Kips Bay Health Center, New York	G	SC	Pt. Dem, Lec, EPP	90	Spring/58	Approximately 6 weeks later	C; 30 days	Nil
School Health	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	G	BC	Pt. Dem, Lec, O, AV	5	10/ 3/57	10/ 3/57	C; 1 day	10
Basic Radiological Health	Robert A. Taft Sanitary Engineering Center 4676 Columbia Parkway, Cincinnati	G	SC	Lab, Lec, Pan	70	9/ 9/57 1/13/58	9/20/57	C; 10 days	Unknown
Occupational Radiation Protection	Robert A. Taft Sanitary Engineering Center 4676 Columbia Parkway, Cincinnati	G	SC	Lab, Lec, Pan	70	9/23/57 3/10/58	10/ 4/57	C; Unknown	Unknown

Key will be found on page 1774.

OCCUPATIONAL MEDICINE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Radiation for Industrial Physicians and Lawyers	University of Cincinnati College of Medicine Institute of Industrial Health, Eden and Bethseda, Cincinnati	S	SC	Sem, Lec, O	38	9/ 9/57	9/13/57	C; 5 days	100
Occupational Skin Problems	University of Cincinnati College of Medicine Institute of Industrial Health, Eden and Bethseda, Cincinnati	Unknown	SC	Pt. Dem, LC, Lec, Pan, AV	35	10/28/57	11/ 1/57	C; 5 days	Unknown
Fourth Annual Postgraduate Course in Aviation Medicine	College of Medicine Ohio State University Columbus, Ohio	G	SC	LC, Sem, Lec, O	30	9/ 9/57	9/13/57	C; 5 days	75
Industrial Medicine	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	24	10/16/57	10/18/57	C; 3 days	50

OPHTHALMOLOGY

Glaucoma	University of California Medical Center Second and Parnassus Aves., San Francisco	S	BC	Pt. Dem, WR, Lec, Pan	14	9/26/57	9/27/57	C; 2 days	60
Annual Ophthalmological Conference	University of California Medical Center Second and Parnassus Aves., San Francisco	S	BC	Pt. Dem, Sem, Lec, Pan, EPP	21	12/ 4/57	12/ 6/57	C; 3 days	60
Postgraduate Seminar in Ophthalmology and Summer Convention of The Colorado Ophthalmological Society	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	BC	Lec, Pan	32	7/58	7/58	C; 4 days	50
Ophthalmic Pathology	Department of the Army Office of the Surgeon General, Education and Training Division Washington 25, D. C.; course at Walter Reed Army Medical Center, Washington, D. C.	S	SC	Lab, Sem, Lec, O, AV, TV, EPP	45	3/17/58	3/21/58	C; 5 days	Nil
Clinical Ophthalmology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O	50	Arranged		C; 2 wk.	50
Extraocular Muscles I—Strabismus	Northwestern University Medical School 303 E. Chicago Ave., Chicago	S	SC	Pt. Dem, LC, Sem, Lec	24	9/16/57	9/27/57	C; 10 days	100
Extraocular Muscles II—Strabismus	Northwestern University Medical School 303 E. Chicago Ave., Chicago	S	SCI	LC, Lec	200	Arranged		I; arranged, 100 sessions twice weekly for 50 weeks	150
Ophthalmology, Basic and Clinical	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	S	SCI	Lab, Pt. Dem, LC Sem, Lec, Pan, O, AV	500	9/ 3/57	8/29/58	I; 250 sessions 4-5:30 p. m. daily	Nil
Ophthalmology Clinical Conference	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	S	SCI	Lab, Pt. Dem, WR, Lec, O, AV	100	9/ 4/57	8/27/58	I; 50 sessions 2 hr. weekly, Wednesdays	Nil
Ophthalmology	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	S	SCI	Sem, Lec, O, AV	70	10/ 1/57	5/27/58	I; 35 sessions 2 hr. weekly, Tuesdays	Nil
Ophthalmic Therapy	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	S	BC	Lec, Pan, O, AV	16	5/28/58	5/29/58	C; 2 days	50
Ophthalmology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	SC	Pt. Dem, Lec, Pan, O, AV	17	4/ 7/58	4/ 9/58	C; 2½ days	35
Infectious Diseases of the Eye	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	S	SC	Lab, WR, Sem, Lec	40	1/13/58	1/17/58	C; 5 days	50
Lancaster Courses in Ophthalmology	Ophthalmological Study Council Parker Heath, M.D., Director Sullivan Harbor, Me.; course at Colby College, Waterville, Me.	B	SC	Lab, Sem, Lec, Pan, O, AV, EPP	446	6/58	9/58	C; 66 days	325
Seminar on Aniseikonia and Eikonometry	Bureau of Visual Science American Optical Company, Southbridge, Mass	S	BC	Sem, Lec, O, AV, EPP	20	10/ 7/57 Spring/58	10/ 9/57	C; 3 days	Nil
Educational Conference in Visual Optics and Refraction	Bureau of Visual Science American Optical Company, Southbridge, Mass.	G	BC	Sem, Lec, O, AV	20	11/11/57 Spring/58	11/13/57	C; 3 days	Nil
Ophthalmology for Specialists	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	S	BC	Lec, O	15	1/ 9/58	1/11/58	C; 3 days	50
Ophthalmology	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	S	BC	Lec, O, AV	18	4/21/58	4/23/58	C; 3 days	50
Home Study Course in Ophthalmology, Basic Sciences	American Academy of Ophthalmology and Otolaryngology 15 Second St., S.W., Rochester, Minn.	S	HS (C)	HS (AR)		9/ 1/57	6/30/58		20
Methods of Refraction Especially	Newark Eye and Ear Infirmary	S	BCI	Pt. Dem, LC, Lec, O, AV, EPP	8	9/ 9/57	9/30/57	I; 4 sessions 2 hr. weekly, Mondays	Nil

Methods of Refraction Especially Correction of the Partially Seeing Patient	Newark Eye and Ear Infirmary 77 Central Ave., Newark 2, N. J.	S	BCI	Pt. Dem, LC, Lec, O, AV, EPP	8	9/ 9/57	9/30/57	I; 4 sessions 2 hr. weekly, Mondays	Nil
Slit Lamp Microscopy and Use of Gonioscope	Newark Eye and Ear Infirmary 77 Central Ave., Newark, N. J.	S	BCI	Pt. Dem, LC, Lec, O, AV, EPP	8	11/ 4/57	11/25/57	I; 4 sessions 2 hr. weekly, Mondays	Nil
Extra Ocular Muscles Physiology, Pathologic Variations, Therapy	Newark Eye and Ear Infirmary 77 Central Ave., Newark 2, N. J.	S	BCI	Pt. Dem, LC, WR, Lec, O, AV, EPP	8	12/ 3/57	12/12/57	I; 4 sessions 2 hr. twice weekly, Tuesdays, Thursdays	Nil
Neuro-Ophthalmology	Newark Eye and Ear Infirmary 77 Central Ave., Newark 2, N. J.	S	BCI	Pt. Dem, LC, WR, Lec, O	8	3/ 6/58	3/27/58	I; 4 sessions 2 hr. weekly, Thursdays	Nil
Gonioscopy and Glaucoma	Brooklyn Eye and Ear Hospital 29 Greene Ave., Brooklyn, N. Y.	S	BC	Pt. Dem, Lec, O, EPP	18	11/18/57 5/19/58	11/20/57	C; 3 days	50
Ophthalmology PM62 Glaucoma	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	S	SCI	Sem, Lec, AV	16	10/21/57	12/ 9/57	I; 8 sessions 2 hr. weekly, Mondays	30
Ophthalmology PM60 Elementary Ophthalmoscopy	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Lab, Pt. Dem, LC, Lec	27	1/ 8/58	3/ 5/58	I; 9 sessions 3 hr. weekly, Wednesdays	30
Ophthalmology PM30 Histopathology of the Eye	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SCI	Lec, AV	16	4/ 2/58	4/25/58	I; 8 sessions 2 hr. twice weekly, Wednesdays, Fridays	100
Combined Course in Ophthalmoscopy and External Eye Diseases	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Chronic Disease Hospital, Brooklyn, N. Y.	G	SCI	Pt. Dem, Lec	16	4/58	5/58	I; 8 sessions 2 hr. weekly, Wednesdays	30
Refraction	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Pt. Dem, LC, Sem, Lec, O, AV, EPP	72	4/ 1/58	4/30/58	C; 24 days	100
Ophthalmology	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, S, Lec, Pan, O, AV, Cad, EPP	360	4/ 1/58	6/30/58	C; 72 days	300
578-A Ocular Expressions of Systemic Disease	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Lec	15	9/16/57	9/20/57	C; 5 days	55
5714-A Histopathology	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Lab, Lec	15	9/16/57	9/20/57	C; 5 days	100
574-A Surgery of the Eye (for Specialists)	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, LC, Cad	42	10/28/57 3/24/58	11/ 2/57	C; 6 days	125
5711-A Ophthalmoscopy	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, Lec	15	11/ 4/57	11/ 8/57	C; 5 days	55
577-A Surgery of the Cornea	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Lab, Pt. Dem, Lec, AV	35	12/ 2/57	12/ 6/57	C; 5 days	200
579-A Neuro-Ophthalmology	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Lec, Dem, O, Pt. Dem	15	1/13/58	1/17/58	C; 5 days	55
5715-A Annual Review of Ophthalmological Advances	New York University Post-Graduate Medical School 550 First Ave., New York	S	BC	Pt. Dem, Lec	17	2/20/58	2/22/58	C; 2½ days	100
571-A Motor Anomalies of the Eye (Part I) (for Specialists)	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, Lec	42	3/ 3/58	3/ 8/58	C; 6 days	100
572-A Motor Anomalies of the Eye (Part II) (for Specialists)	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, Lec	35	3/10/58	3/14/58	C; 5 days	85
573-A Ophthalmic Plastic Surgery (for Specialists)	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, Lec	15	3/31/58	4/ 4/58	C; 5 days	85
Ophthalmology	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.; course at Hotel Syracuse, Syracuse, N. Y.	S	BC	Lec, Pan, O, AV	14	12/ 6/57	12/ 7/57	C; 2 days	25
Newer Developments in Ophthalmology	Frank E. Bunts Educational Institute (Cleveland Clinic Foundation) 2020 E. 93rd Street, Cleveland	G	BC	Pt. Dem, LC, Sem, Lec, Pan, O, AV	12	12/11/57	12/12/57	C; 2 days	20

Key will be found on page 1774.

OPHTHALMOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Postgraduate Course in Ophthalmology	Ohio State University Columbus, Ohio	S	BC	Lec, AV	16	3/ 3/58	3/ 4/58	C; 2 days	20
Postgraduate Convention of the Oregon Academy of Ophthalmology and Otolaryngology	Dr. Robert W. Zeller, Secretary-Treasurer, Postgraduate Convention 603 Mayer Bldg., Portland 5, Ore.; course at University of Oregon Medical School Portland 1, Ore.	S	BC	Pt. Dem, Lec, Pan, O, AV	12	3/24/58	3/25/58	C; 2 days	60 (if otolaryngology sessions are also attended, fee for combined courses is 90)

OPHTHALMOLOGY AND OTOLARYNGOLOGY

Midwinter Seminar in Ophthalmology and Otolaryngology	Division of Postgraduate Education University of Florida College of Medicine, Gainesville, Fla.; course at hotel, Miami Beach, Fla.	S	SC	Lec, Pan, AV	30	1/27/58	2/ 1/58	C; 6 days	40
Otolaryngology & Ophthalmology—including refraction and cadaver study	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, Sem, Sur, Lec, O, Cad, AV, EPP	480	4/ 1/58	6/30/58	C; 72 days	600
Thirty-First Annual Spring Congress in Ophthalmology & Otolaryngology	Gill Memorial Eye, Ear and Throat Hospital 711 S. Jefferson St., Roanoke, Va.: course at hotel	S	SC	LC, Sem, Lec, O, AV	40	4/14/58	4/19/58	C; 5½ days	80

ORTHOPEDIC SURGERY
(See also Anatomy, Pathology, and Pediatrics)

Orthopedics in General Practice	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles	G	BC	Pt. Dem, LC, Lec, Pan, O	23	2/15/58	2/17/58	C; 3 days	75
Orthopedic Pathology	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	S	SCI	Lab, Lec	Unknown	9/57	6/58	I; 1 hr. weekly, Thursdays for 9 mo.	10
Orthopedic Pathology	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	S	SCI	Lab, Lec, O, AV, EPP	21	11/ 4/57	2/17/58	I; 14 sessions 1½ hr. weekly, Mondays	50
Orthopedics	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	G	BC	Lec, Pan, O, AV	8	3/19/58	3/20/58	C; 2 days	10
Orthopedic Surgery 1	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Children's Hospital, Boston	S	SC	Lab, Pt. Dem, LC, WR, Sur, Lec	Varies	Arranged		Arranged	800 for 12 mo.
Orthopedic Surgery 2	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Massachusetts General Hospital, Boston	S	SC	Lab, Pt. Dem, LC, WR, Lec	Varies	Arranged		Arranged	800 for 12 mo.
PM81—Orthopedic Surgery—Foot Disabilities	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Hospital for Joint Diseases, New York 35	G	SCI	Pt. Dem, LC, Lec	20	10/ 3/57	12/ 5/57	I; 10 sessions 2 hr. weekly, Thursdays	100
PM80 Orthopedic Surgery	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Hospital for Joint Diseases, New York 35	G	SCI	Pt. Dem, LC, Lec	66	3/ 6/58	5/15/58	I; 11 sessions 6 hr. weekly, Thursdays	100
Orthopedics in General Practice	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SC or SCI	LC, Sem, Lec	40 and 24	Arranged		C; 1 week I; 6 sessions 4 hr. weekly, Wednesdays	60
Orthopedics of the Foot	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Pt. Dem, Lec, Cad	16	Arranged		I; 8 sessions	100
Operative Orthopedics (Dissection)	New York Polyclinic Hospital 345 W. 50th St., New York	G	SCI	S, Lec, Cad	10	Arranged		I; 10 sessions 1 hr. weekly, Thursdays	100
584-A Orthopedics for the General Practitioner	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Sem	16	10/ 8/57	12/ 3/57	I; 8 sessions 2 hr. weekly, Tuesdays	45
586-A Orthopedic Aspects of the Treatment of Rheumatic Disorders	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, LC, WR, Lec	20	10/ 9/57	12/11/57	I; 10 sessions 2 hr. weekly, Wednesdays	50
583-A Anatomy for Orthopedic Surgeons	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Cad	35	1/13/58	1/17/58	C; 5 days	125
582-A Orthopedics in	New York University Post-Graduate Medical	G	BC	Pt. Dem, LC, WR, Sem, Lec	21	2/19/58	2/21/58	C; 3 days	55

582-A Orthopedics in General Practice	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Pt. Dem, LC, WR, Sem, Lec	21	2/19/58	2/21/58	C; 3 days	55
585-A Orthopedic Aspects of the Treatment of Rheumatic Disorders	New York University Post-Graduate Medical School 550 First Ave., New York	G	BCI	Pt. Dem, LC, WR	21	3/18/58	4/ 1/58	I; 3 sessions 7 hr. weekly, Tuesdays	50
	OTOLARYNGOLOGY (See also Anatomy)								
Otolaryngology	University of California School of Medicine Los Angeles 24	G	BC	Lec, Pan, O, AV	12	11/15/57	11/16/57	C; 2 days	Unknown
Clinical Otolaryngology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O	50	Arranged		C; 2 weeks	50
Fellowship Fenestration Surgery	Northwestern University Medical School 303 E. Chicago Ave., Chicago	S	SC	Lab, Pt. Dem, LC, WR, Sur, Sem, Lec, Pan	960	Arranged		C; 80 days	500
Endaural Otologic Surgery	Northwestern University Medical School 303 E. Chicago Ave., Chicago	S	SC	Lab, Pt. Dem, Sur, Sem, Lec, Pan	172	3/ 3/58	3/28/58	C; 20 days	500
Audiology	Northwestern University Medical School 303 E. Chicago Ave., Chicago	S	SC	Lab, Pt. Dem, Lec	52	3/31/58	4/ 5/58	C; 6 days	100
Annual Otolaryngologic Assembly—Current Trends in Otolaryngology	University of Illinois College of Medicine 1853 W. Polk St., Chicago 12	S	SC	Lab, Cad, Sem, Lec, Pan, O, AV	69	9/30/57	10/ 6/57	C; 7 days	125
Basic Science of Otolaryngology	University of Illinois College of Medicine 1853 W. Polk St., Chicago 12	S	SC	Lab, Pt. Dem, LC, WR, Cad, Sur, Sem, Lec, Pan, O, AV	1584	10/ 1/57	6/30/58	C; 190 days	750
Otolaryngology	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	S	SC	Lab, Pt. Dem, LC, Sur, Lec, Pan, O, AV, EPP	100	3/24/58	4/ 5/58	C; 13 days	250
Otolaryngology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	BC	Pt. Dem, Sem, Lec, Pan, O, AV	17	4/ 9/58	4/11/58	C; 2½ days	35
Rhinoplastic Surgery	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	S	SC	Pt. Dem, WR, Sem, Lec, Pan	48	2/ 3/58	2/ 8/58	C; 6 days	100
Otolaryngology	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	S	BC	Pt. Dem, Lec, O, AV	18	4/17/58	4/19/58	C; 3 days	50
Home Study Course in Otolaryngology	American Academy of Ophthalmology and Otolaryngology 15 Second St., S.W., Rochester, Minn.	S	HS (C)	HS (AR)		9/ 1/57	6/30/58		20
Medical Otolayngology, Headaches, Allergy	Hansel Foundation 634 N. Grand Ave., St. Louis	S	SC	Lab, Lec, Pan, O, AV, EPP	40	5/27/58	5/31/58	C; 5 days	150
Otorhinolaryngology PM30 Trans-meatal (Endural) Surgery	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SC	Lab, Sur	60	9/ 9/57 4/ 7/58	9/20/57	C; 10 days	300
Otorhinolaryngology PM34 Vocal Rehabilitation	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SCI	Lec, Pan	12	10/31/57	12/12/57	I; 6 sessions 2 hr. weekly, Thursdays	50
Otorhinolaryngology PM31 Mobilization of Stapes	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SC	Lab, Pt. Dem, Lec	120	11/ 4/57 3/10/58	11/22/57	C; 15 days	500
Otorhinolaryngology PM32 Indirect Laryngoscopy, Voice Rehabilitation and Audiology	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SC	Pt. Dem, LC, Sem	35	2/10/58	2/15/58	C; 5 days	150
Otolaryngology PM2 Histopathology of ear, nose, throat	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32	S	SCI	Lab	32	4/ 8/58	5/29/58	I; 16 sessions 2 hr. weekly, Thursdays	100
Otorhinolaryngology PM33 Rhinoplasty and Otoplasty	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SC	Lab, LC, Sur, Lec	112	7/12/58	7/25/58	C; 14 days	350
Bronchoscopy	New York Polyclinic Hospital 345 W. 50th St., New York	G	SCI	LC, Cad, Lec	8	Arranged		I; 1 hr. weekly on Wednesdays by arrangement	150
596-A Anatomy of the Head, Neck and Thorax for Otolaryngologists	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Cad, Lec	90	9/16/57	10/25/57	C; 30 days	125
597-A Audiology	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Pt. Dem, LC, Lec	21	9/23/57 3/ 5/58	9/25/57	C; 3 days	75
598-A Neuro-Otolaryngology	New York University Post-Graduate Medical School 550 First Ave., New York	S	BC	LC, Lec	21	9/26/57 3/ 6/58	9/28/57	C; 3 days	50

Key will be found on page 1774.

OTOLARYNGOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
594-A Endaural Surgery	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Cad, Sem, Lec	70	11/ 4/57 1/27/58	11/16/57	C; 10 days	250
5911-A Broncho-Esophagology	New York University Post-Graduate Medical School 550 First Ave., New York	S	SCI	LC, Sem	Variable By arrangement			I; Arranged	250
595-A Endoscopy: Bronchoesophagology and Laryngology	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, Sem, Lec	70	12/ 2/57	12/14/57	C; 10 days	200
5910-A Laryngology and Surgery of the Larynx and Neck	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Cad, Lec	70	1/ 6/58	1/17/58	C; 10 days	250
5912-A Seminar in Recent Advances in Otolaryngology	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, LC, WR, Sem	35	2/17/58	2/21/58	C; 5 days	75
Seventh Annual Teaching Day in Otolaryngology	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	S	BC	Sem, Lec, Pan, O, AV	8	Spring/58		C; 1 day	Unknown
E.N.T. Problems and Allergic Respiratory Disease	University of Cincinnati Medical College Eden Avenue—Rear of General Hospital, Cincinnati	G	BC	Sem, Lec, Pan, AV	5	3/ 9/58	3/ 9/58	C; 1 day	10
Twenty-second Annual Graduate Convention in Otology, Rhinology, and Laryngology	University of Cincinnati College of Medicine Eden and Bethesda Ave., Cincinnati 19	S	SC	Lab, Pt. Dem, Sur, Sem, Lec, O, AV, EPP	45	4/14/58	4/19/58	C; 5½ days	150
Otolaryngic Radiology	Ohio State University Hospital Dept. of Otolaryngology Columbus 10, Ohio	S	BC	Lec, O, AV	18	2/ 4/58	2/ 6/58	C; 3 days	50
Laryngology and Laryngeal Surgery	Temple University School of Medicine and Hospital 3400 N. Broad St., Philadelphia 40	B	SC	Lab, Pt. Dem, LC, Sur, Sem, Lec, Pan, O, AV, EPP	80	11/ 4/57	11/15/57	C; 11 days	250
Postgraduate Convention of the Oregon Academy of Ophthalmology and Otolaryngology	Dr. Robert W. Zeller, Secretary-treasurer, Postgraduate Convention 603 Mayer Bldg., Portland 5, Ore.; course at University of Oregon Medical School Portland 1, Ore.	S	BC	Pt. Dem, Lec, Pan, O, AV	12	3/21/58	3/22/58	C; 2 days	60 (If ophthalmology sessions are also attended, fee for the combined courses is 90)
Bronchology, Esophagology and Laryngeal Surgery	University of Pennsylvania Graduate School of Medicine Philadelphia	S	SC	Lab, Sur, Sem, Lec, O, AV	Unknown	6/ 3/58	6/15/58	C; 2 weeks	250

PATHOLOGY

Surgical Pathology	College of Medical Evangelist 1720 Brooklyn Ave., Los Angeles 33	G	SCI	Lec	99	10/ 1/57	6/ 3/58	I; 33 sessions 3 hr. weekly, Tuesdays	Unknown
Application of Histochemistry to Pathology	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D. C.; course at Walter Reed Army Medical Center, Washington, D. C.	S	SC	Lab, Sem, Lec, O, AV, TV, EPP	40	12/ 2/57 2/ 3/58	12/ 6/57	C; 5 days	Nil
Pathology of the Oral Regions	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D. C.; course at Armed Forces Institute of Pathology, Washington 25, D. C.	B	SC	Sem, Lec, Pan, AV	32½	3/24/58	3/28/58	C; 5 days	Nil
Surgical Pathology Review	Baptist Memorial Hospital 800 Miami Road, Jacksonville, Fla.	S	SCI	Lab, Lec, O, AV	9	1/10/58	2/23/58	I; 6 sessions 1½ hr. weekly, Wednesdays	Nil
Surgical Pathology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, WR, Lec, O, AV	20	9/18/57 3/19/58	11/21/57	I; 10 sessions 2 hr. weekly, Wednesdays	100
Surgical Pathology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Sem, O, AV, EPP	96	Arranged		C; 4 weeks	250
Surgical Pathology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Sem, Lec, O, AV, EPP	48	Arranged		C; 2 weeks	150
Surgical Pathology	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	G	SCI	Lab, Lec, O, AV, EPP	50	9/ 4/57	8/27/58	I; 50 sessions 1 hr. weekly, Wednesdays	Arranged
Gross Autopsy Conference	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	G	SCI	Sem, O	100	9/ 5/57	8/28/58	I; 50 sessions 2 hr. weekly, Thursdays	Varies
Microscopic Pathology Conferences	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	S	SCI	Lab, Pan, O, AV	50	9/ 7/57	8/30/58	I; 1 hr. weekly Saturdays	Arranged
								I; by	Arranged

Microscopic Pathology Conferences	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	S	SCI	Lab, Pan, O, AV	50	9/ 7/57	8/30/58	I; 1 hr. weekly Saturdays	Arranged
Neuropathology Conference	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	S	SCI	Lab, Lec, O, AV, EPP	Varies	Arranged		I; by arrangement	Arranged
Neuropathology	University of Maryland School of Medicine 522 W. Lombard St., Baltimore 1	S	SC	Lab, Lec, Pan	6 mo.	Arranged		C; 6 mo.	210
PM30—Pathology—General and Special	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32 course at Mount Sinai Hospital, New York 29	G	SCI	Lab	30	9/21/57	1/11/58	I; 15 sessions 2 hr. weekly, Saturdays	100
PM31 Pathology—Surgical	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32 course at Mount Sinai Hospital, New York 29	G	SCI	Lab	30	1/18/58	5/ 3/58	I; 15 sessions 2 hr. weekly, Saturdays	100
Review of General Pathology and Advanced Instruction in Special Pathology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Avenue & 106th St., New York	B	SC	Pt. Dem, Lec	126	Arranged		C; 14 weeks	200
Surgical Pathology (a)	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, S, Sem, Lec, O, AV, EPP	360	4/ 1/58	6/30/58	C; 72 days	300
General Pathology	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, EPP		4/ 1/58	3/31/59	C; 12 months	1,000
444-A Pathology for Surgeons	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, Lec	16	9/30/57 3/31/58	11/21/57	I; 16 sessions 1 hr. twice weekly, Mondays and Thursdays	75
445-A Histopathology for Gynecologists	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lab, Lec	16	10/ 1/57 4/ 1/58	11/22/57	I; 16 sessions 1 hr. weekly, Fridays	75
Applied Gynecological Pathology	The Long Island Jewish Hospital 270-05 76th Ave., New Hyde Park, N. Y.	B	SCI	Lab, Sem, Lec, AV	30	10/ 8/57	12/10/57	I; 10 sessions 3 hr. weekly, Tuesdays	100
PEDIATRICS (See also Surgery, Occupational Medicine, and Psychiatry)									
Hereditary Diseases of Childhood	City of Hope Medical Center 1500 E. Duarte Rd., Duarte, Cal.	G	BC	Pt. Dem, LC, Lec, Pan, O, AV	13	10/12/57	10/13/57	C; 2 days	10 per day or 15 for entire course
Preventive Psychiatry in Pediatric Practice	University of California at Los Angeles Medical Center Los Angeles 24	G	SCI	Sem, Lec, O	24	Spring/58		I; 12 sessions 2 hr. weekly	100
Refresher Course for Pediatricians	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles	G	BC	Pt. Dem, LC, Lec, Pan, O	15	Fall/57		C; 2 days	50
864—Pediatric Clinics for the General Practitioner	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33 course at Childrens Hospital, Los Angeles 27	G	SCI	Pt. Dem, LC, Lec	20	10/ 8/57	3/18/58	I; 20 sessions 1 hr. weekly, Tuesdays	40
867—Short term Clinical Course in Pediatrics	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles course at Childrens Hospital, Los Angeles	G	MT		Unknown	Arranged		Arranged	150 2 wks. + 50 for each additional 2 wks. up to 6 wks.
Pediatrics	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	SC	Lec, Pan	40	4/28/58	5/ 2/58	C; 5 days	50
General Pediatrics	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O	20	9/18/57 3/19/58	11/20/57	I; 10 sessions 2 hr. weekly, Wednesdays	100
Diagnosis and Treatment of Congenital and Heart Disease in Infants and Children	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	25	11/ 4/57	11/16/57	C; 5 days	100
Course V—Pediatrics	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	70	5/12/58	5/23/58	C; 11 days	150
Clinical Pediatrics	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Pt. Dem, LC, WR, Sur, Sem, Lec, O, AV	120	Arranged		C; 4 weeks	100
Clinical Pediatrics	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Pt. Dem, LC, WR, Sur, Sem, Lec, O	60	Arranged		C; 2 weeks	60
Emotional Problems of Childhood	North Shore Hospital 225 Sheridan Rd., Winnetka, Ill.	G	SCI	Sem, Lec, O, AV	18	10/ 2/57	6/ 4/58	I; 9 sessions 2 hr. monthly, Wednesdays	Nil
Clinical Pediatrics	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Lec, Pan, O, AV	8	12/18/57	12/18/57	C; 1 day	10
Pediatrics	State University of Iowa College of Medicine University Hospital, Iowa City	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	10-12	9/11/57	9/12/57	C; 1½ days	20

Key will be found on page 1774.

PEDIATRICS—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Children's Mercy Hospital Annual Clinical Day	Children's Mercy Hospital 1710 Independence Ave., Kansas City 6, Mo.	G	BC	Pt. Dem, Lec, Pan, AV	6	Spring/58		C; 1 day	None
Pediatrics	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BC	Pt. Dem, LC, Lec, Pan, O, AV	21	3/10/58	3/12/58	C; 3 days	35
Pediatric Post-Graduate Series	University of Louisville Medical School 101 W. Chestnut, Louisville, Ky.	G	SCI	Pt. Dem, LC, WR, Sem, Lec, O	24	4/ 8/58	6/20/58	I; 8 sessions 3 hr. weekly, Tuesdays	30
Pediatric Orthopedics	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	S	SC	Pt. Dem, WR, Sem, Pan, Lec, O, AV	40	2/24/58	2/28/58	C; 5 days	50
Pediatrics 3	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Massachusetts General Hospital, Boston	G	SC	Pt. Dem, LC, Lec, O, AV	73	6/ 2/58	6/13/58	C; 11 days	150
Pediatric Metabolism and Endocrinology	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Massachusetts General Hospital, Boston	G	BC	Pt. Dem, LC, Lec, O, AV	28	6/10/58	6/13/58	C; 4 days	70
Pediatrics	Tufts University School of Medicine Postgraduate Division 171 Harrison Ave., Boston	G	BC	Pt. Dem, Lec, Pan, AV	14	3/20/58	3/22/58	C; 3 days	20
Pediatrics	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	BC	Pt. Dem, Lec, O, AV	18	1/27/58	1/29/58	C; 3 days	30
Pediatrics for Pediatricians	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial, University of Minnesota, Minneapolis 14	S	BC	Lec, Pan, O	15	9/24/57	9/26/57	C; 3 days	30
Pediatrics for General Physicians	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial, University of Minnesota, Minneapolis 14	G	BC	Lec, O	15	3/ 3/58	3/ 5/58	C; 3 days	30
Pediatrics	University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	BC	Pt. Dem, WR, Sem, Lec, Pan, O, AV	12	4/ 7/58	4/ 8/58	C; 2 days	10 per day
Newer Trends in Pediatrics	St. Michael's Hospital 306 High St., Newark, N. J.	G	SCI	Pt. Dem, Sur, Lec, Pan, O, AV	12	3/ 5/58	4/ 9/58	I; 6 sessions 2 hr. weekly, Wednesdays	25
Full Time Clinical Pediatrics Course	Albany Medical College 47 New Scotland Ave., Albany, N. Y.	G	O (MT except that credit is given)	Pt. Dem, LC, WR, Sem, Lec, O	Unknown	Arranged		9 mo. continuous	600
Pediatric Teaching Day	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	BC	Pt. Dem, Sem, Lec, O	6	11/13/57	11/13/57	C; 1 day	10
Recent Advances in Communicable Disease	Meadowbrook Hospital Carman Ave. and Bethpage Turnpike, Hempstead, N. Y.	G	SCI	Pt. Dem, LC, WR, Lec, Pan, O	24	10/16/57	1/15/58	I; 12 sessions 2 hr. weekly, Wednesdays	25
Bureau of Child Health Preservice Training Course	Dr. Harold Jacobziner, Assistant Commissioner N. Y. C. Department of Health 125 Worth St., New York	G	SC	Pt. Dem, Lec, EPP	75	1/ 9/58 4/58	Unknown	C; 25 days	Nil
Pediatric Allergy	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lab, Sem, Lec	846	Arranged		I; 7 hr. every Wednesday for six mo.	300
Clinical Pediatrics	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SC	Lab, Pt. Dem, WR, Sem, Lec	Unknown	Arranged		C; full time for 1, 3, 6, 9 and 12 mos.	150
Pediatrics	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, Lec	144	4/ 1/58	4/30/58	C; 24 days	100
616-A Pediatric Seminars	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Sem		9/25/57 1/ 8/58 3/26/58		I; 12-36 sessions 3½ hr. weekly on Wednesdays	90-250
615-A Dynamics of Growth and Development	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	WR, Sem, Lec	30	9/26/57 1/16/58	12/ 5/57	I; 10 sessions 3 hr. weekly, Thursdays	60
618-A Pediatric Allergy	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	LC, Lec	36	10/ 1/57 3/ 4/58	12/17/57	I; 12 sessions 3 hr. weekly, Tuesdays	75
524-A Dermatology and Syphilology	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, LC, Lec	35	10/ 7/57	10/11/57	C; 5 days	85
617-A Clinical Pediatric Cardiology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	LC	30	10/16/57 2/19/58	12/18/57	I; 10 sessions 3 hr. weekly, Wednesdays	50
612-A Pediatric Endocrinology and Related Metabolism	New York University Post-Graduate Medical School	G	BC	Pt. Dem, Lec, AV	24	11/11/57	11/14/57	C; 4 days	85

612-A Pediatric Endocrinology and Related Metabolism	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Pt. Dem, Lec, AV	24	11/11/57	11/14/57	C; 4 days	85
611-A Review of Clinical Pediatrics	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, WR, Lec	42	11/18/57 2/17/58	11/23/57	C; 6 days	55
613-A Pediatric Cardiology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lec, Pt. Dem, AV, Dem	35	12/ 2/57	12/ 6/57	C; 5 days	55
614-A Symposium on Tuberculosis and other Pulmonary Diseases in Childhood	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, LC, WR, Lec	35	4/14/58	4/18/58	C; 5 days	65
Problems in Pediatric Practice	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	B	BC	Pt. Dem, Sem, O, AV	14	4/10/58	4/11/58	C; 2 days	10
Southern Pediatric Seminar	Southern Pediatric Seminar Saluda, N. C.	G	SC	Pt. Dem, Sem, Lec, Pan	80	7/ 7/58	7/19/58	C; 13 days	70
Pediatric Advances for Pediatricians and General Practitioners	The Children's Hospital of Philadelphia 1740 Bainbridge St., Philadelphia 46	G	SC	Pt. Dem, Lec, Pan, O	32	5/26/58	5/30/58	C; 5 days	115
Pediatrics for the General Practitioner	Hahnemann Medical College and Hospital 230 N. Broad St., Philadelphia	G	SCI	Pt. Dem, LC, WR, Sem, Lec, AV	24	10/ 3/57	12/16/57	I; 12 sessions 2 hr. weekly, Thursdays	50
Dermatoses in Infants and Children	The Skin and Cancer Hospital and St. Christopher's Hospital of Temple University Medical Center 804 Pine St., Philadelphia	S	SC	Pt. Dem, LC, Sur, Lec, Pan, O, AV	36	10/14/57	10/19/57	C; 6 days	125
Pediatric Gastroenterology and Infant Feeding	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Pt. Dem, LC, Lec	24	9/25/57	12/11/57	I; 12 sessions 2 hr. weekly, Wednesdays	50
Practical Pediatric Hematology	University of Pennsylvania Graduate School of Medicine Philadelphia	B	BC	Lab, LC, Sem, Lec, O	21	6/ 2/58	6/ 4/58	C; 3 days	80
Blood Group Incompatibilities and Erythroblastosis Fetalis	University of Pennsylvania Graduate School of Medicine Philadelphia	Unknown	BC	Lab, Sem, Lec, Pan, O	14	6/ 5/58	6/ 6/58	C; 2 days	50
Pediatrics	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	G	SC	Pt. Dem, WR, Lec, Pan, O, AV	40	10/ 7/57	10/11/57	C; 5 days	75
Postgraduate Refresher Course in Pediatrics	University of Texas Postgraduate School of Medicine 213 West Avenue G., Temple, Tex. course at Scott and White Memorial Hospitals Scott, Sherwood, and Brindley Foundation Temple, Tex.	G	SC	Pt. Dem, LC, WR, EPP	176	Monthly		C; 24 days	25
Postgraduate Pediatrics	University of Washington Seattle 5	B	BC	Pt. Dem, Sem, Lec, Pan, O, AV	18	3/24/58	3/27/58	C; 3 days	25
	PERIPHERAL VASCULAR DISEASE (See also Surgery)								
Medicine PM 65	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	LC, WR, Sem, Lec	75	10/ 3/57	4/10/58	I; 25 sessions 3 hr. weekly, Thursdays	125
Medicine PM65A Advanced Peripheral Vascular Surgery	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	LC, WR, Sem, Lec	51	11/13/57	3/19/58	I; 17 sessions 3 hr. weekly, Wednesdays	150
5417-A Peripheral Vascular Disease	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, Lec	35	11/18/57	11/22/57	C; 5 days	55
5418-A Peripheral Vascular Diseases	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, Lec	16	4/ 8/58	4/27/58	I; 8 sessions 2 hr. weekly, Tuesdays	45
Medical and Surgical Advances in the Management of Peripheral Vascular Disorders	Frank E. Bunts Educational Institute (Cleveland Clinic Foundation) 2020 E. 93rd St., Cleveland	G	BC	LC, Sem, Lec, Pan, O, AV	12	4/16/58 Repeated on demand only	4/17/58	C; 2 days	30
Peripheral Vascular Disease	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Lec, AV	10	9/24/57	12/10/57	I; 10 sessions 1 hr. weekly, Tuesdays	20
Peripheral Vascular Diseases	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	B	BC	AV Lab, Sem, Lec, Pan, O.	Unknown	6/26/58	6/28/58	C; 3 days	75

Key will be found on page 1774.

PHYSICAL MEDICINE & REHABILITATION

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Physical Therapy and Occupational Therapy in the Care of Neuro-Muscular Disease	Georgia Warm Springs Foundation Warm Springs, Ga.	B	SC	Pt. Dem, LC, Lec, Pan, O, AV	36	10/ 7/57 1/ 6/58 4/ 7/58	10/11/57	C; 5 days	Nil
Physical Therapy and Occupational Therapy in the Care of Neuro-Muscular Disease	Georgia Warm Springs Foundation Warm Springs, Ga.	G	SC	Pt. Dem, LC, Lec, Pan, O, AV, EPP	480	10/ 7/57 1/ 6/58 4/ 7/58	12/21/57	C; 90 days	Nil
Physical Therapy and Occupational Therapy in the Care of Neuro-Muscular Disease	Georgia Warm Springs Foundation Warm Springs, Ga.	G	SC	Pt. Dem, LC, Lec, Pan, O, AV, EPP	960	10/ 7/57 1/ 6/58 4/ 7/58	3/20/58	C; 180 days	Nil
Physical Medicine for Specialists	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	S	BC	Pt. Dem, Lec, O	15	11/18/57	11/20/57	C; 3 days	30
Arthritis and Physical Medicine for General Physicians	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	BC	Pt. Dem, Lec, O	15	4/10/58	4/12/58	C; 3 days	30
Extensive Course in Physical Medicine and Rehabilitation	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	SCI	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, EPP	120	10/ 2/57	2/26/58	I; 20 sessions 6 hr. weekly, Wednesdays	300
PM1 Cerebral Palsy	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32 course at Columbia-Presbyterian Medical Center, New York 32	G	SC	LC, Lec, Pan	105	10/14/57 3/ 3/58	11/ 1/57	C; 15 days	100
Physical Medicine and Rehabilitation	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y. course at Coney Island Hospital, Brooklyn, N. Y.	G	SCI	Pt. Dem, Lec	10	10/57 4/58	12/57	I; 10 sessions 1 hr. weekly, Thursdays	20
Physical Medicine and Rehabilitation	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, Lec, AV	144	4/ 1/58	4/30/58	C; 24 days	100
621-A Physical Medicine and Rehabilitation	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Pt. Dem, Lec	70	1/ 2/58	1/15/58	C; 10 days	100

PHYSIOLOGY

Clinical Physiology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lec, O	20	9/18/57 3/19/58	11/21/57	I; 10 sessions 2 hr. weekly, Wednesdays	100
PM32-Physiology Normal and Pathological	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32 course at Mount Sinai Hospital, New York 29	G	SCI	Lec	52	10/ 2/57	4/ 9/58	I; 26 sessions 2 hr. weekly, Wednesdays	150
PM30-Physiology Digestive Tract	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32 course at Mount Sinai Hospital, New York 29	G	SCI	Lec	36	1/ 8/58	5/ 7/58	I; 18 sessions 2 hr. weekly Wednesdays	100

PROCTOLOGY

Proctoscopy and Sigmoidoscopy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	BCI	Lab, Pt. Dem, LC, Sur, Lec, O, EPP	12	9/11/57 10/23/57 11/13/57 1/ 8/58 2/19/58 3/19/58 5/21/58	10/ 2/57	I; 4 sessions 3 hr. weekly Wednesdays	75
Proctology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	BCI	Lab, Pt. Dem, LC, Sur, Lec, O, AV	8	10/23/57 3/19/58	11/13/57	I; 4 sessions 2 hr. weekly, Wednesdays	75
Proctology for General Physicians	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	SC	Sur, Lec, O	30	5/12/58	5/16/58	C; 5 days	50
Proctology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y. course at Jewish Hospital, Brooklyn, N. Y.	G	SCI	LC, Lec	24	10/57 4/58	12/57	I; 12 sessions 2 hr. weekly, Mondays, Fridays	40
Proctology (Clinical and Cadaver)	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, S, Lec, Cad, O, AV, EPP	90	4/ 1/58	5/12/58	C; 36 days	175
Postgraduate Refresher Course in Proctology	University of Texas Postgraduate School of Medicine 218 West Avenue G, Temple, Tex. course at Scott and White Memorial Hospitals Scott, Sherwood, and Brindley Foundation Temple, Tex.	G	SC	Pt. Dem, LC, WR, Sur, O	88	Arranged		C; 12 days	25

PSYCHIATRY

		G	SCI	Sem, Lec, O	24	9/19/57	12/12/57	I; 12 sessions	50

PSYCHIATRY

Treatment of Emotional Problems in Office Practice	University of California Medical Center Los Angeles 24	G	SCI	Sem, Lec, O	24	9/19/57	12/12/57	I; 12 sessions 2 hr. weekly, Thursdays	50
Advanced Emotional Problems	University of California at Los Angeles Medical Center Los Angeles 24	G	SCI	Sem, O	24	Spring/58		I; 12 sessions 2 hr. weekly	75
Psychiatric Symposium on Sexual Problems	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles course at Statler Hotel, Los Angeles Room, Los Angeles	G	BC	LC, Lec, Pan, O, AV	7	9/27/57	9/27/57	C; 1 day	Unknown
Child Psychiatry	Catholic University of America Michigan Av. N.E., Washington 17, D. C.	G	SCI	Sem, Lec, O	30	10/ 1/57 2/ 1/58	6/30/58	I; 15 sessions 2 hr. twice monthly, Fridays	45
Experimental Basis of Psychiatric Theory	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D. C.; course at Walter Reed Army Medical Center, Washington, D. C.	S	SC	Lab, WR, Sem, Lec, O, AV	160	2/10/58	3/ 8/58	C; 20 days	Nil
Emotional Problems in General Practice	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Lec, Pan, O, AV	8	11/14/57	11/14/57	C; 1 day	10
Iowa-Nebraska Neuropsychiatric Association Meeting	State University of Iowa College of Medicine University Hospitals, Iowa City	G	BC	Lec, Pan, O	9-11	10/26/57	10/27/57	C; 1½ days	20
Continuous Case Seminar	American Institute for Psychoanalysis 220 W. 98th St., New York	S	SCI	Sem	15	9/16/57	11/18/57	I; 10 sessions 1½ hr. weekly, Mondays	50
Clinical Conferences on Case Histories II	American Institute for Psychoanalysis 220 W. 98th St., New York	S	SCI	Sem	15	9/17/57	11/19/57	I; 10 sessions 1½ hr. weekly, Tuesdays	40
Present-Day Perspectives in Psychoanalysis	American Institute for Psychoanalysis 220 W. 98th St., New York; course at New School for Social Research, New York	G	SCI	Lec	22½	9/30/57	1/20/58	I; 15 sessions 1½ hr. weekly, Mondays	24
Readings in Psychoanalysis, The Works of Karen Horney	American Institute for Psychoanalysis 220 W. 98th St., New York	B	SCI	Lec	37½	9/30/57	4/28/58	I; 25 sessions 1½ hr. weekly, Mondays	85
Workshop on Dynamics of Behavior	American Institute for Psychoanalysis 220 W. 98th St., New York; course at New School for Social Research, New York	G	SCI	Sem	22½	10/ 1/57	1/21/58	I; 15 sessions 1½ hr. weekly, Tuesdays	45
Seminar on Child Therapy	American Institute for Psychoanalysis 220 W. 98th St., New York	B	SCI	Sem	10½	11/22/57	1/10/58	I; 7 sessions 1½ hr. weekly, Fridays	28
Clinical Conferences	American Institute for Psychoanalysis 220 W. 98th St., New York	S	SCI	Sem	15	11/25/57	2/10/58	I; 10 sessions 1½ hr. weekly, Mondays	50
Introductory Course on Dreams	American Institute for Psychoanalysis 220 W. 98th St., New York	S	SCI	Lec	15	11/26/57	2/11/58	I; 10 sessions 1½ hr. weekly, Tuesdays	40
Problems in Therapy	American Institute for Psychoanalysis 220 W. 98th St., New York	S Graduate Psychoanalysts only	SCI	Sem	15	1/17/58	3/21/58	I; 10 sessions 1½ hr. weekly, Fridays	50
The Psychoanalytic Relationship	American Institute for Psychoanalysis 220 W. 98th St., New York	S	SCI	Sem	22½	2/ 4/58	5/20/58	I; 15 sessions 1½ hr. weekly, Tuesdays	75
Introduction to Psychoanalytic Technique	American Institute for Psychoanalysis 220 W. 98th St., New York	S	SCI	Lec	15	2/ 7/58	4/11/58	I; 10 sessions 1½ hr. weekly, Fridays	40
Our Body Involvement in Emotional Conflict	American Institute for Psychoanalysis 220 W. 98th St., New York; course at New School for Social Research, New York	G	SCI	Lec	22½	2/10/58	5/19/58	I; 15 sessions 1½ hr. weekly, Mondays	24
Maturing: Fulfillment and Frustration	American Institute for Psychoanalysis 220 W. 98th St., New York; course at New School for Social Research, New York	G	SCI	Lec	22½	2/11/58	5/20/58	I; 15 sessions 1½ hr. weekly, Tuesdays	24
Clinical Conferences on Case Histories I	American Institute for Psychoanalysis 220 W. 98th St., New York	S	SCI	Sem	15	2/18/58	4/22/58	I; 10 sessions 1½ hr. weekly, Tuesdays	40

Key will be found on page 1774.

PSYCHIATRY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Psychiatry PM-30 Practical Management of Psychiatric Problems	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SC	LC, Lec, Pan	35	11/18/57	11/22/57	C; 5 days	75
Psychiatry PM 31 Practical Management of Psychiatric Problems	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SCI	LC, Lec, Pan	35	1/13/58	5/12/58	I; 5 sessions 7 hr. first Monday each mo.	75
Psychoanalysis of Groups	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lec	Unknown	Arranged		I; 10 sessions weekly, Fridays	40
Readings in Psychoanalytic Literature (first half)	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	B	SCI	Lec	30	Arranged		I; 15 sessions 2 hr. every other Tuesday	50
Readings in Psychoanalytic Literature—second half	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lec	30	Arranged		I; 15 sessions 2 hr. every other Tuesday	50
Introductory Lectures in Child Psychiatry	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lec	Unknown	Arranged		I; 10 sessions weekly, Thursdays	40
Social Psychology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SCI	Lec	30	Arranged		I; 15 sessions 2 hr. weekly, Wednesdays	35
Personality Structure and Psychoanalysis	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	B	SCI	Lec	20	Arranged		I; 10 sessions 2 hr. every other Tuesday	40
Psychosomatic Medicine—Autonomic Nervous System and Psychogenesis	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	B	SCI	Lec	16	Arranged		I; 8 sessions 2 hr. every other week	45
704 Continuous Case Seminar	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC, Sem	18	10/ 1/57	12/17/57	I; 12 sessions 1½ hr. weekly, Tuesdays	Unknown
718 Clinical Conferences on Treatment Planning	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC, Sem	24	10/ 1/57	1/21/58	I; 16 sessions 1½ hr. weekly, Tuesdays	Unknown
717 Clinical Conferences	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC, Sem	15	10/ 2/57	12/ 4/57	I; 10 sessions 1½ hr. weekly, Wednesdays	Unknown
715 Introduction to Psychotherapy and Psychotherapeutic Technique	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC, Lec	18	10/ 2/57	12/18/57	I; 12 sessions 1½ hr. weekly, Wednesdays	Unknown
731 Clinical Conferences	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC, Lec	7½	10/ 2/57 2/12/58	10/30/57	I; 5 sessions 1½ hr. weekly, Wednesdays	Unknown
706 Techniques of Dream Interpretation	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC, Sem	15	10/ 3/57	12/12/57	I; 10 sessions 1½ hr. weekly, Thursdays	Unknown
716-816 Basic Psychiatry and Neurology	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC	Fall-24 Spring-22½	10/ 4/57 (Part II) 2/14/58	1/24/58	I; 1½ hr. weekly, Fridays	Unknown
817 Clinical Conferences: Character Disorders	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	Sem	15	2/10/58	4/21/58	I; 10 sessions 1½ hr. weekly, Mondays	Unknown
804 Continuous Case Seminar	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC, Sem	18	2/11/58	4/22/58	I; 12 sessions 1½ hr. weekly, Tuesdays	Unknown
804 Continuous Case Seminar	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC, Sem	22½	2/12/58	5/28/58	I; 15 sessions 1½ hr. weekly, Wednesdays	Unknown
818 The Borderline Patient	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC, Lec	22½	2/12/58	5/28/58	I; 15 sessions 1½ hr weekly, Wednesdays	Unknown
806 Continuous Case Seminar	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S	SCI	LC, Sem	15	3/19/58	5/28/58	I; 10 sessions 1½ hr. weekly, Wednesdays	Unknown
Modern Conceptions of Psychoanalysis B-1—Psychologic Contributions of Harry Stack Sullivan	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	S	SCI	Lec, O	9	10/ 1/57	12/10/57	I; 6 sessions 1½ hr. every other Tuesday	20
Evolution of Psychoanalytic	The William Alanson White Institute of	G	SCI	Sem, Lec, O	16½	10/ 2/57	12/18/57	I; 11 sessions 1½ hr. weekly	35

Evolution of Psychoanalytic Concepts A-3	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	G	SCI	Sem, Lec, O	16½	10/ 2/57	12/18/57	I; 11 sessions 1½ hr. weekly on Wednesdays	35
The Significance of Physical Symptoms in Personality Disorders A-11	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	G	SCI	Sem, Lec, O	12	10/ 3/57	11/21/57	I; 8 sessions 1½ hr. weekly, Thursdays	25
Thought Processes, Symbols and Forms CS-18	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	S	SCI	Lec, O	10½	10/ 4/57	12/20/57	I; 7 sessions 1½ hr. every other Friday	30
Interpersonal Factors Involved in Clinical Psychotherapy with Adolescents CS-34	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	S	SCI	Sem, O	15	10/ 7/57	12/ 9/57	I; 10 sessions 1½ hr. weekly, Mondays	35
Law and Psychiatry CS-4	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	S	SCI	Sem, O	20	1/10/58	5/16/58	I; 10 sessions 2 hr. every other Friday	40
Some Philosophic Problems Relevant to Psychoanalysis C-6	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	S	SCI	Lec, O	15	1/10/58	5/16/58	I; 10 sessions 1½ hr. every other Friday	45
Basic Principles AS-1, Introduction to theory of interpersonal relationships	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	G	SCI	Lec, O	16½	1/21/58	6/10/58	I; 11 sessions 1½ hr. every other Tuesday	45
Case Seminar on Clinic Treatment of Adolescents CS-10	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	S	SCI	Sem, Lec, O	16	1/27/58	5/ 5/58	I; 8 sessions 2 hr. every other Monday	35
Literature of Psychoanalysis Part I A-10	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	G	SCI	Lec, O	16½	1/28/58	6/17/58	I; 11 sessions 1½ hr. every other Tuesday	35
Anthropology and the Comparative Study of Civilization A-4	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	G	SCI	Lec, O	15	1/31/58	6/ 6/58	I; 10 sessions 1½ hr. every other Friday	40
Abnormal Psychology of the Child AE-9	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	S	SCI	Lec, O	12	2/12/58	5/21/58	I; 8 sessions 1½ hr. every other Wednesday	35
Seminar on Current Issues in Psychoanalysis CS-14	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	S	SCI	Sem, O	12	2/13/58	5/22/58	I; 8 sessions 1½ hr. every other Thursday	25
Research in the Behavioral Sciences C-3	The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology 12 E. 86th St., New York	S	SCI	Lec, O	9	2/20/58	5/ 1/58	I; 6 sessions 1½ hr. every other Thursday	30
Course I For Psychiatrists Who Desire to Specialize in the Practice of Psychoanalysis	Institute of the Philadelphia Association for Psychoanalysis 122 S. 18th St., Philadelphia	S	SC	Sem, Lec	453	9/57	6/58	C; 123 days	400 a yr.
Course III For Psychoanalytic Students Who Desire to Specialize in the Practice of Psychoanalysis of Children	Institute of the Philadelphia Association for Psychoanalysis 122 S. 18th St., Philadelphia	S	SC	Sem, Lec	250+	9/57	Unknown	C; 60+ days	1.50 an hr.
Institute of Psychiatric Treatment, New Techniques	Institute of Psychiatric Treatment 433 Marlborough St., Boston 15; course at Philadelphia State Hospital, Philadelphia	S	BC	Pt. Dem, LC, Sem, Lec, O, EPP	21	10/17/57	10/19/57	C; 3 days	35
Psychotherapy for Physicians, Introductory	Chief, Staunton Clinic, Dept. of Psychiatry, University of Pittsburgh, Pittsburgh; course at Falk Clinic, Pittsburgh	G	SCI	Sem, O	24	9/4-5/57	11/20-21/57	I; 12 sessions 2 hr. weekly, Wed. or Thurs.	40
Psychotherapy for Physicians, Introductory	Chief, Staunton Clinic, Dept. of Psychiatry, University of Pittsburgh, Pittsburgh; course at Falk Clinic, Pittsburgh	for those enrolled last year	SCI	Sem, O	24	11/27/57 3/ 5/58		I; 12 sessions 2 hr. weekly, Wednesdays or Thursdays	40
Office Psychiatry	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	24	1/29/58	1/31/58	C; 3 days	50
PULMONARY DISEASE (See also Radiology)									
Recent Advances in Chest Diseases	City of Hope Medical Center 1500 E. Duarte Rd., Duarte, Cal.	G	BC	Pt. Dem, LC, Lec, Pan, O, AV	19½	11/ 6/57	11/ 8/57	C; 3 days	10 per day or 25 for entire course
Tenth Annual Symposium on Pulmonary Diseases	Department of the Army Office of the Surgeon General, Education and Training Division Washington 25, D. C.; course at Fitzsimons Army Hospital, Denver	B	SC	Pt. Dem, LC, Lec, Pan	40	9/16/57	9/20/57	C; 5 days	5 for non-military registrants
Tenth Annual Symposium on Pulmonary Diseases	Office of Postgraduate Medical Education University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20; course at Fitzsimons Army Hospital, Denver 20	B	SC	Pt. Dem, Sem, Lec, Pan	40	9/16/57	9/20/57	C; 5 days	5

Key will be found on page 1774.

PULMONARY DISEASE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Clinical Bronchoscopy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, Lec, O, EPP	15	9/16/57 10/21/57 11/18/57 12/ 9/57 1/20/58 2/17/58 3/17/58 4/14/58 5/19/58 6/16/58	9/20/57	C; 5 days	100
Pulmonary Function, Correlated with Clinical Pulmonary Disease	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Pt. Dem, Lec, Pan, O, AV	16	1/27/58	1/28/58	C; 2 days	20
12th Annual Postgraduate Course in Diseases of the Chest	American College of Chest Physicians 112 E. Chestnut St., Chicago 11; course at Knickerbocker Hotel, Chicago	G	SC	Lec, Pan, O, AV	40	10/21/57	10/25/57	C; 5 days	75
Postgraduate Course in Diseases of the Chest	American College of Chest Physicians 112 E. Chestnut St., Chicago 11; course at Ambassador Hotel, Los Angeles	G	SC	Lec, Pan, O, AV	40	12/ 9/57	12/13/57	C; 5 days	75
10th Annual Postgraduate Course on Diseases of the Chest	American College of Chest Physicians 112 E. Chestnut St., Chicago 11; course at Park-Sheraton Hotel, New York	G	SC	Lec, Pan, O, AV	40	11/11/57	11/15/57	C; 5 days	75
Clinical Traineeship in Pulmonary Disease	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	MT	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV	Approx. 160	11/ 1/57 1/ 2/58 5/ 1/58	11/30/57	Approx. 30 days	50 per mo. for residents of Kansas; 100 per mo. for nonresidents
Pulmonary Diseases	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, TV	14	1/13/58	1/14/58	C; 2 days	30
The Measurement of Pulmonary Function in Health and Disease	American Trudeau Society Edward J. Welch, M.D., Chairman 1101 Beacon St., Brookline, Mass.; course at Boston City Hospital, Boston	S	SC	Lab, Pt. Dem, Sem, Lec, Pan, O, AV	35	3/24/58	3/28/58	C; 5 days	75
Pulmonary Diseases	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	SC	Pt. Dem, Lec, O, AV	30	3/24/58	3/28/58	C; 5 days	50
Clinical Course in Pulmonary Diseases	Albany Medical College Albany, N. Y.; course at Veterans Administration Hospital Albany, N. Y.	G	SC	Pt. Dem, LC, WR, Sem, Lec, O	40	Unknown		C; 5 days	60
PM80 Medicine Diseases of the Chest	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Bellevue Hospital, New York	G	SC	LC, WR, Lec	Approx. 140	10/ 1/57 2/ 3/58	10/31/57	C; 20 days or more	125 for first mo., 75 each additional mo.
Medicine PM71 Diseases of the Chest	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	SCI	Sem, Lec, WR	50	1/ 7/58	5/27/58	I; 20 sessions 2½ hr. weekly, Tuesdays	100
Diseases of the Chest, Acute and Chronic	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SCI	Pt. Dem, WR, Pan	28	Arranged		I; 8 sessions 3½ hr. weekly, Thursdays	100
5422-A Acute and Chronic Diseases of the Chest	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Pt. Dem, Lec	16	4/ 7/58	4/26/58	I; unknown	40
Sixth Annual Symposium for General Practitioners on Tuberculosis and other Chronic Pulmonary Diseases	Trudeau Foundation and Ray Brook State Tuberculosis Hospital 7 Church St., Saranac Lake, N. Y. and Ray Brook, N. Y.	G	SC	Pt. Dem, LC, WR, Lec, Pan, O	26	7/ 7/58	7/11/58	C; 5 days	40
Current Problems in Pulmonary Diseases	Ohio Tuberculosis Hospital, Neil C. Andrews, M.D. Ohio State University Campus Columbus 10, Ohio; course at Ohio State University Student Union Bldg., Columbus 10, Ohio	G	BC	Pt. Dem, Lec, Pan, O, AV	10	9/27/57	9/28/57	C; 2 days	25
Diseases of the Chest	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCI	Sem, Lec, O, AV	15	10/ 7/57	1/27/58	I; 15 sessions 1 hr. weekly, Mondays	25
Postgraduate Refresher Course in Diseases of the Chest	University of Texas Postgraduate School of Medicine 213 W. Avenue G., Temple, Tex.; course at Scott and White Memorial Hospitals Scott, Sherwood, and Brindley Foundation Temple, Tex.	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, Pan, O, AV	88	Unknown		C; 12 days	25

RADIOLOGY

					24	10/16/57	10/19/57	C; 4 days	Unknown

RADIOLOGY

Cardiac Roentgenology	University of California Medical Center Los Angeles 24	G	BC	Lec, Pan, TV	24	10/16/57	10/19/57	C; 4 days	Unknown
Fundamental Principles and Clinical Aspects of Radioactive Therapy	University of California at Los Angeles Medical Center Los Angeles 24	G	BC	Lec, Pan, O, AV	15	Spring/58		C; 2½ days	Unknown
The Physics of Diagnostic and Therapeutic Radiology	University of Southern California Postgraduate Division 2025 Zonal Ave., Los Angeles 33; course at Los Angeles County Hospital Los Angeles	S (physicians preparing for specialty of radiology also dermatology)	SCI	Lec	20	9/ 6/57	1/24/58	I; 20 sessions 1 hr. weekly, Fridays	50
882a Lectures in the Physics and Clinical Application of Radioactive Isotopes	University of Southern California School of Medicine, Postgraduate Division 2025 Zonal Ave., Los Angeles	S	SCI	LC, Lec, O	20	Spring/58		I; 20 sessions 1 hr. weekly, Fridays	50
882b Practical Experience in the Laboratory Techniques Needed for Working with Radioactive Isotopes	University of Southern California School of Medicine, Postgraduate Division 2025 Zonal Ave., Los Angeles	S	SC	Unknown	Unknown	Arranged		C; Arranged	350
882c Supervised Clinical Experience with Radioactive Isotopes	University of Southern California School of Medicine, Postgraduate Division 2025 Zonal Ave., Los Angeles	S	MT	MT	Unknown	Arranged		Arranged	165
Radiology Physics and Medical Use of Isotopes	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	SCI	Lec	Unknown	9/57	5/58	I; once weekly, Tuesdays for 9 mo.	10
Radiology 302, Introduction to X-rays and Radioisotopes	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	S	SCI	Lec	11	9/26/57	12/12/57	I; 11 sessions 1 hr. weekly, Thursdays	25
Radiology 303, X-Ray Physics	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	S	SCI	Lab, Lec	20	1/ 9/58	3/13/58	I; 10 sessions 2 hr. weekly, Thursdays	40
Radiology 304, Radioactivity	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	S	SCI	Lab, Lec	30	3/20/58	5/22/58	I; 10 sessions 3 hr. weekly, Thursdays	150
Radioisotopes	Emory University School of Medicine Emory University Atlanta, Ga.	Unknown	SC	Unknown	Unknown	9/57	9/57	C; 5 days	Unknown
Course II—Clinical Radiology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV	100	Arranged		C; 4 wk.	125
Course III—Clinical Radiology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, Lec, O, AV	50	Arranged		C; 2 wk.	70
Course III—X-Ray Therapy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	30-240	Arranged		C; 1, 2, 4, or 8 wk. later	60-300
Course I—Diagnostic Radiology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, Lec, O, AV	68	9/16/57 12/ 2/57 2/ 3/58 4/28/58	9/28/57	C; 12 days	125
Diagnostic Roentgenology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, Lec, O, EPP	40	9/18/57 3/19/58	11/21/57	I; 10 sessions 4 hr. weekly, Wednesdays	100
Clinical Uses of Radioisotopes	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR, Lec, O, EPP	60	9/18/57 3/19/58	11/20/57	I; 10 sessions 6 hr. weekly, Wednesdays	200
The Clinical Uses of Radioisotopes	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	S	SC	Lab, Pt. Dem, LC, Lec, O, AV, EPP	60	10/ 7/57 5/ 5/58	10/18/57	C; 10 days	200
The Clinical Use of Radioactive Iodine	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	30	3/31/58	4/ 4/58	C; 5 days	100
Radium Therapy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Lec, O, AV, EPP	30	6/23/58	6/27/58	C; 5 days	100
Radiation Physics	Northwestern University Medical School 303 E. Chicago Ave., Chicago	S	SCI	Lec	34	1/13/58	5/ 5/58	I; 17 sessions 2 hr. weekly, Mondays	35
Radiation Physics	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	S	SCI	Lec, O, AV	20	10/ 2/57	2/26/58	I; 20 sessions 1 hr. weekly, Wednesdays	100
Genitourinary Radiology	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	G	SCI	Lec, O, AV	5	10/ 3/57	10/31/57	I; 5 sessions 1 hr. weekly, Thursdays	25

Key will be found on page 1774.

RADIOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Radiation Therapy	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	G	SCI	Pt. Dem, Lec, O, AV	30	10/ 7/57	5/26/58	I; 30 sessions 1 hr. weekly, Mondays	Varies
Non-traumatic Orthopedic Radiology	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	S	SCI	Lec, O, AV	8	11/ 7/57	12/26/57	I; 8 sessions 1 hr. weekly, Thursdays	40
Radiology of Acute Abdomen	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	G	BCI	Lec, O, AV	4	2/ 6/58	2/27/58	I; 4 sessions 1 hr. weekly, Thursdays	20
Clinical Use of Radioisotopes	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	G	SC	Lab, Pt. Dem, Lec, O, AV, EPP	100	4/ 7/58	4/18/58	C; 12 days	200
Neuroradiology	Indiana University School of Medicine 1100 W. Michigan, Indianapolis	S	SCI	Lec, O, AV	5	5/ 1/58	5/29/58	I; 5 sessions 1 hr. weekly, Thursdays	25
Radiology	State University of Iowa College of Medicine University Hospital, Iowa City	G	BC	Lec, Pan, O, AV	9-11	10/25/57	10/26/57	C; 1½ days	20 (no charge for members of the Iowa Radiological Society)
Radiology and Radioactive Isotopes	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	BC	Pt. Dem, Lec, Pan, O, AV	28	2/10/58	2/13/58	C; 4 days	50
Radiological Physics	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	SCI	Lec	20	2/58	4/58	I; 10 sessions 2 hr. weekly, Sundays	30 5 for re-enrollment
Diagnostic Radiology	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	B	BC	Pt. Dem, WR, Sem, Lec	16	1/23/58	1/24/58	C; 2 days	25
Clinical Radioisotope Techniques	U. S. Naval Medical School National Naval Medical Center, Bethesda 14, Md.	S	MT	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, AV, EPP	760	1/20/58	5/31/58	95 days	Unknown
Pediatric Radiology	Harvard Medical School Courses for Graduates 25 Shattuck St., Boston; course at Children's Hospital, Boston	G	SC	Lab, Pt. Dem, LC, Lec, O	120 to 130 a mo.	Arranged		C; 26 days a mo.	150 a mo.
General Radiology 1	Harvard Medical School Courses for Graduates 25 Shattuck St., Boston; course at Peter Bent Brigham Hospital, Boston	S	SC	Lab, Pt. Dem, LC, Lec	120 to 130 a mo.	Arranged		Arranged	150 a mo.
General Radiology 2	Harvard Medical School Courses for Graduates 25 Shattuck St., Boston; course at Massachusetts General Hospital, Boston	S	SC	Lab, Pt. Dem, LC, Lec, O	120 to 130 a mo.	Arranged		C; 26 days a mo.	150 a mo.
General Radiology 3	Harvard Medical School Courses for Graduates 25 Shattuck St., Boston; course at Boston City Hospital, Boston	S	SC	Lab, Pt. Dem, LC, Lec, O	120 to 130 a mo.	Arranged		C; 26 days a mo.	150 a mo.
Diagnostic Radiology	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	SC	Lec, Dem, O, AV	20	4/ 7/58	4/11/58	C; 5 days	50
Cardiovascular Radiology for Specialists	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial, University of Minnesota, Minneapolis 14	S	SC	Sem, Lec, Pan, O	33	11/ 4/57	11/ 9/57	C; 6 days	75
Radiology for General Physicians	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial, University of Minnesota, Minneapolis 14	G	BC	Lec, O	15	4/ 7/58	4/ 9/58	C; 3 days	30
X-Ray Diagnosis	Meadowbrook Hospital Carman Ave. and Bethpage Turnpike, Hempstead, N. Y.	G	SCI	Sem, Lec, Pan	15	10/ 2/57	4/30/58	I; 15 sessions 1 hr. every other Wednesday	30
Operative Radium Therapy	Queens General Hospital 82-68 164th St., Jamaica, N. Y.	S	SCI	Lab, Pt. Dem, LC, Sem, Lec, O	24	1/ 4/58	2/22/58	I; 8 sessions 3 hr. weekly, Saturdays	100
Medical Uses of Radioactive Isotopes	Queens General Hospital 82-68 164th St., Jamaica 32, N. Y.	S	O—Training for AEC certif.	Lab, Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, EPP	90	2/18/58	6/17/58	17 days	250
Radiology PM 35 Use of Radioactive Iodine	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SC	Lab, Pt. Dem, LC, Lec	144 (approximately)	9/57 12/57 3/58	11/57	C; approximately 48 days	300
PM 31 Radiology Chest	Columbia University College Physicians and Surgeons	G	SC	Lec	10½	9/30/57 3/17/58	10/ 8/57	C; 7 days	50

course at Mount Sinai Hospital, New York 29						3/58			
PM 31 Radiology Chest	Columbia University College Physicians and Surgeons 630 W 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SC	Lec	10½	9/30/57 3/17/58	10/ 8/57	C; 7 days	50
Radiology PM 80 Diagnosis Diseases Bones and Joints	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Hospital for Joint Diseases, New York 35	G	SCI	Lec, AV	24	10/ 2/57	12/18/57	I; 12 sessions 2 hr. weekly, Wednesdays	150
Radiology PM 41 Clinical Use of Radioactive Isotopes	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SCI	Lab, Lec	102	10/ 7/57	5/26/58	I; 34 sessions 3 hr. weekly, Mondays	300
Radiology PM 34 Chest Disease Differential Diagnosis	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SCI	Pt. Dem, LC	15	10/14/57 3/31/58	12/16/57	I; 10 sessions 1½ hr. weekly, Mondays	50
Radiology PM 1 Radiological Physics	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32	S	SCI	Lec	34	1/ 7/58	5/ 1/58	I; 34 sessions 1 hr. twice weekly, Tuesdays and Thursdays	50
PM 32 Radiology Gastrointestinal Tract	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	SC	Lec	10	3/ 3/58	3/14/58	C; 10 days	50
Radiology PM 40 Clinical Use of Radioactive Isotopes	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SC	Lab, Lec	140	6/ 2/58	6/27/58	C; 20 days	300
Radiology PM 51 Radiotherapy	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SC	Lab, LC, Lec, EPP	6 or 12 mos.	Arranged		C; 6 or 12 mos.	300 for 6 mos. 600 for 12 mos.
Roentgen Diagnosis in Gastroenterology	Joint Committee on Postgraduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Beth-El Hospital, Brooklyn, N. Y.	G	SCI	Lec	8	10/57 4/58	12/57	I; 8 sessions 1 hr. weekly, Tuesdays	20
X-Ray Diagnosis of Chest Diseases	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Beth-El Hospital, Brooklyn, N. Y.	G	SCI	Lec	8	4/58	6/58	I; 8 sessions 1 hr. weekly, Thursdays	20
Diagnostic Roentgenology	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave and 106th St., New York	G	SC	Pt. Dem, Sem, Lec	Arranged	Arranged		C; Arranged	150
Radium and Roentgen Therapy	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave and 106th St., New York	G	SC	Lec	Arranged	Arranged		C; Arranged	150
Roentgen Interpretation	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lec	480	4/ 1/58	6/30/58	C; 72 days	300
657-A Radiological Aspects of Medicolegal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, Dem, AV	18	9/24/57	12/10/57	I; 12 sessions 1½ hr. weekly, Tuesdays	35
651-A Diagnostic Radiology for General Practitioners	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, Dem, AV	64	9/25/57	4/30/58	I; 32 sessions 2 hr. weekly, Wednesdays	125
655-A Clinical Radiation Therapy	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Sem, Lec	36	10/ 2/57	1/29/58	I; 18 sessions 2 hr. weekly, Wednesdays	100
654-A Radiobiology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Sem, Lec	30	2/ 5/58	5/28/58	I; 20 sessions 1½ hr. weekly, Wednesdays	75
656-A Radioactive Isotopes	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab	154	By arrangement		C; 1 month	150
Roentgen Diagnosis	University of Cincinnati College of Medicine Cincinnati; course at Cincinnati General Hospital, Cincinnati	S	SC	Pt. Dem, Sem, Lec, Pan, O	44	6/24/58	6/29/58	C; 6 days	150
Radiology	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	G	SC	Pt. Dem, WR, Lec, Pan, O	40	3/24/58	3/28/58	C; 5 days	75
Clinical Use of Radioisotopes	University of Tennessee College of Medicine 62 S. Dunlap, Memphis, Tenn.	S	SC	Pt. Dem, WR, Lec, Pan, O, AV	80	5/ 5/58	5/16/58	C; 10 days	100

Key will be found on page 1774.

RADIOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Basic Course in Radioisotope Techniques	Oak Ridge Institute of Nuclear Studies P.O. Box 117, Oak Ridge, Tenn.	S	SC	Lab, Pt. Dem, LC, Sem, Lec, AV, EPP	108	9/ 9/57	10/ 4/57	C; 20 days	25

SURGERY

(See also Anatomy, Pathology, Radiology, and General Practice)

Surgery and Surgical Specialties (Full-time Basic Science Course)	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G	SC	WR, Sur, Sem, Cad, Lec, Pan	Over 1200	9/29/57	6/ 6/58	C; 162 days	800 plus books
General Surgery	University of California at Los Angeles Medical Center Los Angeles 24	G	SCI	Lec, Pan, O, AV	24	Spring/58		I; 12 sessions 2 hr. weekly	Unknown
Minor Surgery	University of California at Los Angeles Medical Center Los Angeles 24	G	BC	Lec, Pan, Cad, O, AV	7	Spring/58		C; 1 day	25
Surgical Diagnosis in General Practice	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	G	BC	Pt. Dem, LC, Lec, Pan, O	22	1/24/58	1/26/58	C; 3 days	75
A Series of Postgraduate Surgical Programs	U. S. Veterans Administration Hospital Fort Miley 42nd Ave. and Clement St., San Francisco 21	G	SCI	Lab, Pt. Dem, LC, Sem, Lec, Pan	12	9/17/57	10/22/57	I; 6 sessions 2 hr. weekly, Tuesdays	Unknown
Surgery in Acute Trauma	Department of the Army, Office of the Surgeon General, Education and Training Division Washington 25 D. C.; course at Letterman Army Hospital, San Francisco	B	BC	Sem, Lec, Pan O, AV	24	3/31/58	4/ 2/58	C; 3 days	Nil
Oral Surgery	Department of the Army, Office of the Surgeon General, Education and Training Division Washington 25 D. C.; course at Letterman Army Hospital, San Francisco	G	SC	Pt. Dem, WR, Sur, Lec, Pan	36	4/21/58	4/25/58	C; 5 days	Nil
Surgery in Acute Trauma	Department of the Army, Office of the Surgeon General, Education and Training Division Washington 25 D. C.; course at Fitzsimons Army Hospital, Denver	B	BC	Lec	21	4/ 1/58	4/ 3/58	C; 3 days	Nil
Oral Surgery—Diagnosis and Treatment	Department of the Army, Office of the Surgeon General, Education and Training Division Washington 25 D. C.; course at Walter Reed Army Medical Center, Washington, D. C.	G	SC	Pt. Dem, LC, O, Sur, Lec, Pan, AV, TV	40	1/ 6/58	1/10/58	C; 5 days	Nil
Professor Pro Tempore Surgery	Mount Sinai Hospital of Greater Miami 4300 Alton Rd., Miami Beach, Fla.	S	SC	Pt. Dem, LC, WR, Sur, Lec, O, AV	30	12/57	Unknown	C; 6 days	Unknown
Treatment of Varicose Veins	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	BC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV, EPP	10	9/ 9/57 10/14/57 11/18/57 12/16/57 2/ 3/58 3/ 3/58 4/28/58 6/ 9/58	9/10/57	C; 2 days	Unknown
The Vaginal Approach to Pelvic Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	20	9/ 9/57 10/14/57 2/ 3/58 3/ 3/58 4/28/58 6/ 9/58	9/13/57	C; 5 days	125
Surgery of the Colon and Rectum	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	35	9/16/57 10/ 7/57 11/18/57 3/ 3/58 4/ 7/58 5/ 5/58 6/ 9/58	9/20/57	C; 5 days	125
Course I in Surgical Technic in General Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV, EPP	90	9/16/57 10/28/57 11/11/57 12/ 2/57 1/27/58 2/10/58 2/24/58 3/24/58 4/ 7/58 4/28/58 5/12/58 6/ 2/58 7/21/58 8/18/58	9/28/57	C; 12 days	250
Clinical Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, Sur, Lec, O	40	9/18/57 3/19/58	11/21/57	I; 10 sessions 4 hr. weekly, Wednesday	150
					70	9/23/57	10/ 5/57	C; 12 days	250

Clinical Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, Sur, Lec, O	40	9/18/57 3/19/58	11/21/57	I; 10 sessions 4 hr. weekly, Wednesday	150
2 Week Course in General Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	70	9/23/57 5/ 5/58	10/ 5/57	C; 12 days	250
Esophageal Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	25	9/30/57 6/16/58	10/ 4/57	C; 5 days	150
Thoracic Surgery	Cock County Graduate School of Medicine 707 S. Wood St., Chicago	Unknown	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	30	10/ 7/57 6/ 9/58	10/12/57	C; 6 days	125
Basic Principles in General Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	85	10/14/57 1/13/58 4/ 7/58 7/ 7/58	10/28/57	C; 12 days	200
Breast and Thyroid Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	34	10/21/57 6/16/58	11/ 2/57	C; 6 days	150
Course in General Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur. Lec, O, AV	25	10/28/57 2/10/58 5/12/58	11/ 1/57	C; 5 days	150
Gallbladder Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	BC	Lab, Pt. Dem, LC, WR. Sur. Lec, O, AV	10	11/ 4/57 4/ 7/58 6/23/58	11/ 6/57	C; 3 days	80
Gynecologic Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Pt. Dem, LC, WR. Sur, Lec, O	20	11/ 6/57 4/30/58	12/ 4/57	I; 5 sessions 4 hr. weekly, Wednesdays	100
Surgery of Hernia	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	BC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV	13	11/ 7/57 4/10/58 6/26/58	11/ 9/57	C; 3 days	80
Surgical Technic with Practice	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SCI	Lab, Sur, Lec, O, AV, EPP	25	11/27/57	1/ 8/58	I; 5 sessions 5 hr. weekly, Wednesdays	125
Surgical Management of Gastrointestinal Anomalies in Infants	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis	G	BC	Lec, Pan, O, AV	8	12/19/57	12/19/57	C; 1 day	10
Surgery	State University of Iowa College of Medicine University Hospital, Iowa City	S	BC	Pt. Dem, LC, WR, Lec, Pan, O, AV	14-16	2/ 4/58	2/ 5/58	C; 2 days	30
Surgery—Operative Clinic	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BCI	Pt. Dem, Sur, Lec, Pan, O, AV, TV	32	11/21/57	3/20/58	I; 4 sessions 8 hr. weekly, Thursdays	50
Surgery	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	BC	Pt. Dem, LC, WR, Sem, Lec, Pan, O, AV, TV	28	1/20/58	1/23/58	C; 4 days	60
Vascular Surgery (by invitation)	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	S on invitation	SC	Pt. Dem, WR. Sem, Lec, Pan		2/24/58	2/28/58	C; 5 days	100
General Surgery 1	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston; course at Massachusetts General Hospital, Boston	G	SC	Pt. Dem, LC, WR, Lec, O	150 (approximately)	10/21/57 5/19/58	11/15/57	C; 23 days	250
Clinical Exercises in Surgery for Practitioners	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G	SCI	Pt. Dem, LC, Lec, O	76	10/ 9/57	3/12/58	I; 21 sessions 4 hr. weekly, Wednesdays	65
Emergency Surgery for General Physicians	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	BC	Lec, O	15	1/30/58	2/ 1/58	C; 3 days	30
Surgery for Surgeons	Robert B. Howard, M.D. Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	S	BC	Sur, Lec, O	15	5/22/58	5/24/58	C; 3 days	30
In Hospital Review in Surgery	University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	MT	Pt. Dem, LC, WR, S, Sem, Lec, Pan, EPP	48	10/ 7/57	10/12/57	6 days	55
Recent Advances in Surgery	St. Michael's Hospital 306 High St., Newark, N. J.	G	SCI	Pt. Dem, Lec, Pan, O, AV	16	10/19/57	2/15/58	I; 8 sessions 2 hr. weekly, Saturdays	25
Office Surgery and Proctology	Meadowbrook Hospital Carman Ave. and Bethpage Turnpike, Hempstead, N. Y.	G	SCI	Pt. Dem, LC, WR, Sem, Lec, Pan	22½	10/11/57	12/18/57	I; 20 sessions 1 hr. and 1½ hr. twice weekly, Wednesdays, Fridays	35

Key will be found on page 1774.

SURGERY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Surgery PM 32 Gastrointestinal Tract	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	SC	Pt. Dem, WR, Sur, Lec, EPP	120	11/ 4/57	11/29/57	C; 20 days	200
Medicine PM 64 Surgical Treatment of Heart Disease	Columbia University College Physicians and Surgeons 630 W. 168th St., New York; course at Montefiore Hospital, New York	G	SCI	Pt. Dem, WR, Sem, Lec	66½	9/24/57 2/ 4/58	1/28/58	I; 18 sessions 3½ hr. weekly, Tuesdays	150 each semester
Medicine PM 65A Advanced Course in Peripheral Vascular Surgery	Columbia University College Physicians and Surgeons 630 W. 168th St., New York; course at Montefiore Hospital, New York	G	SCI	S, Lec, AV	57	11/13/57	3/19/58	I; 19 sessions 3 hr. weekly, Wednesdays	150
Othopedic Surgery PM 1 Musculoskeletal Disease and Injury	Columbia University College Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia Presbyterian Medical Center, New York 32	S	SC	Lec, O	35	1/ 6/58	1/10/58	C; 5 days	100
Office Surgery	Joint Committee on Postgraduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at St. Johns Episcopal Hospital, Brooklyn, N. Y.	G	SCI	Lec, AV	12	10/57	12/57	I; 8 sessions 1½ hr. weekly, Tuesdays	20
Thoracic Surgery	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SC	LC, Sur, Sem, Lec	Arranged	Arranged		C; Arranged	375
Surgical Aspects of Peripheral Vascular Diseases	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	G	SC	Lec	Arranged	Arranged		C; Arranged	200
Surgical Technique	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	B	SC	Lab, Sem, Lec	Arranged	Arranged		C; Arranged	375
Gastrointestinal Surgery	New York Medical College Flower and Fifth Ave. Hospitals Fifth Ave. and 106th St., New York	S	SC	Lab, Sur	Arranged	Arranged		C; Arranged	200
Combined surgical course including cadaver surgery and gynecology	New York Polyclinic Hospital 345 W. 50th St., New York	G	SC	Lab, Pt. Dem, LC, WR, S, Cad, Lec, O, AV	420	4/ 1/58	5/31/58	C; 48 days	350
Thoracic Surgery	New York Polyclinic Hospital 345 W. 50th St., New York	G	SCI	Lab, Pt. Dem, LC, WR, S, Cad, Sem, Lec, O, AV	12	Arranged		I; 6 sessions 2 hr. thrice weekly, Mondays, Wednesdays, Fridays	200
Vascular Surgery	New York Polyclinic Hospital 345 W. 50th St., New York	G	SCI	Lab, Pt. Dem, LC, WR, S, Cad, Lec, O, AV	64	Arranged		I; 8 sessions, 8 hr. weekly on Thursdays	200
663-A Recent Advances in Surgery	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Lab, Pt. Dem, Sem, Lec, Pan, O, AV	88	9/ 9/57	9/21/57	C; 12 days	200
669-A Modern Concepts of the Etiology, Pathologic Physiology and Therapy of Diseases with Surgical Implications	New York University Post-Graduate Medical School 550 First Ave., New York	G	SCI	Lec, Pt. Dem, Pan, AV, Dem	111	9/12/57	6/12/58	I; 37 sessions, 3 hr. weekly, Thursdays	300
551-A The Intervertebral Disc	New York University Post-Graduate Medical School 550 First Ave., New York	S (Neuro-surgeons)	BC	Pt. Dem, Lec	14	10/ 1/57	10/ 2/57	C; 2 days	50
553-A Acute Neurological Problems of General Practice	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, LC, Lec	35	10/14/57 4/28/58	10/18/57	C; 5 days	125
661-A Review of General Surgery (for Specialists)	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Lab, Pt. Dem, Sem, Lec, Pan, O, AV	176	10/21/57	11/16/57	C; 24 days	300
619-A Pediatric Surgery	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	WR, Sem, Lec	21	1/ 6/58	1/ 8/58	C; 3 days	50
552-A Diagnosis and Treatment of Peripheral Nerve Injuries	New York University Post-Graduate Medical School 550 First Ave., New York	G	BC	Pt. Dem, LC, Lec	14	1/ 9/58	1/10/58	C; 2 days	50
662-A Basic Problems in Cancer Therapy (for Surgeons)	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Lab, Pt. Dem, LC, Sem, Lec, Pan, AV	88	1/20/58	2/ 1/58	C; 12 days	200
667-A Surgery of the Hand	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, Cad, Lec	42	3/17/58	3/22/58	C; 6 days	100
Minor Surgery & Office Gynecology	Rochester General Hospital Northside Division 1425 Portland Ave., Rochester, N. Y.	G	BC	Pt. Dem, Sur, Lec, O	12	4/23/58	4/24/58	C; 2 days	10
General Surgery	University of Oregon Medical School	G	SC	Pt. Dem, LC, WR,	35	10/14/57	10/18/57	C; 5 days	50

New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Pt. Dem, Cad, Lec	42	3/17/58	3/22/58	C; 6 days	100	
Minor Surgery & Office Gynecology	Rochester General Hospital Northside Division 1425 Portland Ave., Rochester, N. Y.	G	BC	Pt. Dem, Sur, Lec, O	12	4/23/58	4/24/58	C; 2 days	10
General Surgery	University of Oregon Medical School 2181 S.W. Sam Jackson Park Rd., Portland 1, Ore.	G	SC	Pt. Dem, LC, WR, Sur, Sem, Lec, Pan, O, AV	35	10/14/57	10/18/57	C; 5 days	50
Lecture Course in General and Thoracic Surgery	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	SCl	Lec	108	Unknown		I; 108 sessions 1 hr. weekly	100
Emergency Surgery—Acute Injuries	University of Tennessee College of Medicine 62 S. Dunlap, Memphis	G	BC	Pt. Dem, WR, Lec, Pan, O, AV	24	7/23/58	7/25/58	C; 3 days	50
Surgery in Acute Trauma	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D. C.; course at William Beaumont Army Hospital, El Paso, Tex.	B	BC	Lec, Pan, AV	20	4/ 7/58	4/ 9/58	C; 3 days	Nil
Surgery in Acute Trauma	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D. C.; course at Army Medical Service School Brooke Army Medical Center, Ft. Sam Houston, Tex.	B	BC	Sem, Lec, Pan, O, AV	21	5/ 6/58	5/ 8/58	C; 3 days	Nil
Surgery in Acute Trauma	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D. C.; course at Madigan Army Hospital Tacoma, Wash.	B	BC	Sem, Lec, O, AV	21	4/ 7/58	4/ 9/58	C; 3 days	Nil
Postgraduate Course in Traumatic Surgery	Dr. Robert C. Parkin, Assistant to the Dean University of Wisconsin Medical School 418 N. Randall Ave., Madison, Wis.	G	BC	Pt. Dem, LC, Lec, O	18	4/ 8/58	4/10/58	C; 3 days	25
			UROLOGY **(See also Anatomy)**						
James C. Kimbrough Urological Seminar	Department of the Army Office of the Surgeon General, Education and Training Division, Washington 25, D. C.; course at Walter Reed Army Medical Center Washington, D. C.	B	BC	LC, Lec	24	11/25/57	11/27/57	C; 3 days	Nil
Ten-Day Practical Course In Cystoscopy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV, EPP	36	9/ 9/57 9/23/57 10/21/57 11/ 4/57 12/ 2/57 1/ 6/58 1/20/58 2/ 3/58 2/17/58 3/ 3/58 3/17/58 4/21/58 5/12/58 6/ 2/58 6/16/58 7/ 7/58 7/21/58 8/ 4/58	9/20/57	C; 10 days	150
Urology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago	G	SC	Lab, Pt. Dem, LC, WR, Sur, Lec, O, AV, EPP	80	10/ 7/57 3/31/58	10/19/57	C; 12 days	225
Urology	State University of Iowa College of Medicine University Hospitals, Iowa City	G	BC	Pt. Dem, LC, WR, Lec, Pan, O, AV	9-10	9/27/57	9/28/57	C; 1½ days	20
Medical and Surgical Aspects of Urinary Tract Disease	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	BC	Pt. Dem, Sem, Lec, Pan, O, AV	14	2/ 5/58	2/ 6/58	C; 2 days	30
674-A. Refresher Course in Basic Urology	New York University Post-Graduate Medical School 550 First Ave., New York	G	SC	Lab, Pt. Dem, Cad, Lec	35	1/13/58	1/17/58	C; 5 days	75
671-A. Advanced Course in Urology (for Specialists)	New York University Post-Graduate Medical School 550 First Ave., New York	S	SC	Lab, Pt. Dem, LC, Cad	70	5/12/58	5/23/58	C; 10 days	175

Key will be found on page 1774.

MEDICAL NEWS

ALABAMA

Cardiovascular Research Grants.—Grants totaling $41,400 from the Alabama Heart Association to Alabama residents engaged in research of heart and circulatory diseases have been announced for the fiscal year beginning July 1. The grants were awarded to the following:

Alfred L. Siegel, B.S., $5,000, for a study of the effect of insulin and epinephrine on myocardial metabolism and hemodynamics in the intact animal.

Dr. Lionel M. Bargeron, $3,800, for studies of heart volume shifts during heart surgery.

Dr. Sterling Edwards, $10,200, for investigation of the organization of techniques of intracardiac surgery and further development of synthetic arterial grafts.

Dr. Lloyd L. Hefner, $11,400 for a study of vibratory characteristics of the human body with reference to pressure pulse, kinetocardiographic and ballistocardiographic genesis.

All of the recipients are associated with the University of Alabama Medical Center, Birmingham. In addition, a grant-in-aid of $11,000 has been presented to the Jefferson County Heart Chapter for a pilot study work evaluation unit.

ARKANSAS

Society News.—At its annual meeting the Arkansas Radiological Society elected the following officers: president, Dr. B. A. Rhinehart, Little Rock; vice-president, Dr. Edwin F. Gray, Little Rock; and secretary-treasurer, Dr. E. A. Mendelsohn, Fort Smith.—The Arkansas Dermatological Society has elected the following officers: Dr. Ray Fulmer, Little Rock, president; Dr. Ellis P. Cope, Little Rock, vice-president; Dr. Calvin Dillaha, Little Rock, secretary; and Dr. Davis W. Goldstein, Fort Smith, program chairman. Plans were made to form a regional group of dermatologists within a radius of about 400 miles from Little Rock, which will hold yearly informal meetings.

CALIFORNIA

Society News.—At a recent meeting of the California Society of Plastic Surgeons, Inc., the following officers were elected: president, Dr. Michael M. Gurdin, Beverly Hills; vice-president, Dr. Gerald H. Gray, Oakland; secretary-treasurer, Dr. Benjamin F. Edwards, Santa Monica and historian, Dr. Kathryn L. Stephenson, Santa Barbara.

Hartsough Memorial Established.—A memorial to Dr. Christopher William Hartsough, to be known as the C. W. Hartsough Mental Health Memorial Scholarship Fund, has been established by the San Diego Mental Health Association. Dr. Hartsough who died in October, 1956, was a psychiatrist for the San Diego Schools and a member of the board of directors of the Mental Health Association. The scholarship fund will be used to provide funds for students in the mental health field. For information write the San Diego Mental Health Association, 645 A Street, San Diego 1.

DISTRICT OF COLUMBIA

New Hospital at American University.—Ground will be broken this fall for a new 350-bed hospital and nursing school on the campus of American University. One half of the seventh floor will be devoted to eye patients. An outpatient department and fully equipped surgical facilities will be available. There will be a residency training program in ophthalmology as well as in other clinical departments. The hospital is being built at a cost of eight and one-half million dollars. This money has been raised on a matching-fund federal program with Hill–Burton money.

Hospital Architectural Award.—Providence Hospital, which in March won the *Modern Hospital* certificate of award as "modern hospital of the year," has also received the 19th biennial architectural award from the Washington Board of Trade. Objective of the competition, which was held among 135 entries, is to "improve the design of buildings and attractiveness of the Washington metropolitan area." Eligibility was based on "buildings which have intrinsic merit within themselves and add to the beautification of the area in which they are located." The present Providence Hospital was dedicated on March 25, 1956.

ILLINOIS

Chicago

Personal.—Dr. Charles B. Huggins, professor of urology and director of the Ben May Laboratory for Cancer Research at the University of Chicago, has been presented an honorary doctor of science degree by Torino (Italy) University and elected honorary president of the Italian Urological Association, in recognition of his research on the control of cancer by hormones.

Hospital Residence Hall.—Ground has been broken for the $1,100,000 residence hall in Mount Sinai Hospital. The five story building, scheduled for completion in the fall of 1958, will be named Kling Hall in honor of Leopold Kling, past-president of the hospital and a member of the board of directors. Mr. Kling contributed $150,000 toward the cost of the new hall. Other gifts assisting in the financing the structure include a grant of $181,000 from the Ford Foundation and $500,000 from the Jewish Federation of Chicago. When completed the hall will provide accommodations for 170 interns, graduate nurses, and other hospital personnel.

La Rabida Affiliates with Chicago University.—The signing of the contract making La Rabida Jackson Park Sanitarium an affiliate of the University of Chi-

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Physicians are invited to send to this department items of news of general interest, for example, those relating to society activities, new hospitals, education, and public health. Programs should be received at least three weeks before the date of meeting.

cago's Medical School has been announced by Albert Pick Jr., sanitarium president, and Lawrence A. Kimpton, chancellor of the university. Under the agreement, the Medical School will appoint the sanitarium's medical director, supervise the care of patients, and conduct its research program, and the university's Medical School will direct its teaching program. A nonsectarian institution supported by private charity, La Rabida is devoted to the care of children under 16 suffering from rheumatic fever and rheumatic heart disease. Dr. Hugh McCullouch is medical director of the sanitarium. Other medical schools, Northwestern, University of Illinois, Chicago Medical, and Stritch School of Medicine of Loyola University, which have used La Rabida as a teaching laboratory will be invited to continue their programs there.

IOWA

State Medical Election.—The following officers of the Iowa State Medical Society have been elected: president, Dr. Fred Sternagel, West Des Moines; president-elect, Dr. Rubin H. Flocks, Iowa City; secretary, Dr. Richard F. Birge, Des Moines; and treasurer, Dr. Nevin B. Anderson, Des Moines.

Dr. Kennedy Honored.—Dr. Elizabeth Smith Kennedy, of Oelwein, has been presented with an award as "outstanding general practitioner of 1957," by the Iowa State Medical Society. Dr. Kennedy is the first woman to receive the award, made annually by the society since 1951. Her two daughters, Dr. Elizabeth Kennedy Knuth, of Long Island, N. Y., and Dr. Ruth Kennedy Nayfield, of Eagle Lake, Fla., are physicians. Dr. Kennedy has served as city health officer and city physician in Oelwein. She served as president of the Fayette County Medical Society from 1938 to 1942, and in 1955 she was honored by that group for "her 55 years as a community doctor."

KANSAS

Society News.—At the annual meeting of the Kansas Society of Anesthesiologists, the following officers were reelected to serve for the year 1957-1958: president, Dr. Dale U. Loyd, Wichita; vice-president, Dr. Harold F. Spencer, Emporia; secretary, Dr. William F. Powers, Wichita; and treasurer, Dr. Joseph E. Gootee, Topeka.

MASSACHUSETTS

Dr. Rackemann Honored.—The Netherlands Society of Allergy has instituted the Storm van Leeuwen medal to be presented every five years. Dr. Francis M. Rackemann has been selected to be an honorary member of the society, to give a paper about his work, and to receive the Storm van Leeuwen medal. This paper will be presented at the spring meeting of the society, May 14, 1958.

MICHIGAN

Personal.—Dr. Robert A. McCleary, Ann Arbor, Mich., has been awarded the only senior postdoctoral fellowship in physiological psychology for the academic year 1957-1958 supported by the Carnegie Corporation of New York City.

Society News.—Officers of the Michigan Proctological Society include, Dr. Joseph W. Becker, Detroit, president; Dr. Donald Pearson, Battle Creek, president-elect; Dr. Guy DeBoer, Grand Rapids, secretary; and Dr. Martin Sharp, Saginaw, treasurer.

MISSISSIPPI

Personal.—Dr. Oscar E. Hubbard, formerly chief, Mental Health Section, Alaska Department of Health, has been appointed a professor of psychiatry at the University of Mississippi Medical Center, Jackson. Dr. Hubbard has headed the mental health program in Alaska since July 1, 1955. Before that date he was an associate professor of psychiatry at Baylor University and chief of psychiatric services at the Veterans Administration Hospital in Houston, Texas.——Dr. Thomas J. Brooks Jr., chairman, department of medicine, has been appointed an assistant dean at the University of Mississippi Medical Center, Jackson. Dr. Brooks will handle student affairs in addition to his duties as department chairman.

MONTANA

State Medical Association Meeting.—The 79th annual meeting of the Montana Medical Association will be held at the Lodge on the campus of Montana State University, Missoula, Sept. 19-21, under the presidency of Dr. Edward S. Murphy. The guest clinicians will include Drs. John A. Anderson, professor of pediatrics, University of Minnesota Medical School, Minneapolis; C. Donald Creevy, professor of surgery (urology), University of Minnesota Medical School; Dwight C. Ensign, Detroit; Lyle A. French, associate professor of surgery (neurosurgery), University of Minnesota Medical School; Lester T. Jones, clinical professor of otology, rhinology, and laryngology, University of Oregon Medical School, Portland; Charles W. Mayo, professor of surgery, University of Minnesota Graduate School, Rochester; Ralph A. Reis, professor of obstetrics and gynecology, Northwestern University Medical School, Chicago; Albert D. Reudemann Sr., professor of ophthalmology, Wayne University College of Medicine, Detroit; and Grier F. Starr, consultant in surgical pathology, Mayo Foundation, Rochester, Minn. On Sept. 19, the association will hold its annual reception and banquet at the Florence Hotel. Robert Sullivan, dean of the Law School, Montana State University, will be the principal speaker. Certificates of distinction will be awarded to Dr. Charles R. Thornton, Ronan; Dr. Royal H. Dyer, Sheridan; and Dr. Sadie B. Lindeberg, Miles City, all of whom have completed 50 years in the active practice of medicine. For information write the Montana Medical Association, P. O. Box 1692, Billings, Mont.

NEW MEXICO

Dr. Rosenblum Goes to North Carolina.—Dr. Bernard Rosenblum, formerly director, preventative medicine division, State Health Department, Santa Fe, has assumed new duties with the North Carolina State Board of Health in Raleigh as director of the venereal disease division. He will also serve as associate professor of public health administration in the School of Hygiene

and Public Health at the University of North Carolina, Chapel Hill, and as associate professor of medicine at Duke University, Durham. Dr. Rosenblum, who has been with the U. S. Public Health Service since 1950, was recently promoted to the rank of senior surgeon. Before coming to New Mexico in 1955, he served in Tallahassee and Jacksonville, Fla., Baltimore, Atlanta, Ga., and was on the staff of the Chicago Health Department for two years.

NEW YORK

Grant for Retardation Study.—A four-year research project that will try to determine whether instruction in primary school classes is better than home tutoring for the development of mentally retarded children will get under way soon at Teachers College, Columbia University. A grant of $660,500 from the United States Office of Education will be used to finance the program. President Hollis L. Caswell of Teachers College said that the research would test the hypothesis that group activities in school were better for the later development of mentally retarded children than staying at home. The study will be conducted by the college department of special education, which trains teachers of the handicapped, and will be directed by Maurice H. Fouracre, department head. The project will initially involve 60, and possibly 90, 4-year-old children.

Hospital Director Named.—Dr. Robert C. Hunt has been appointed director of Hudson River State Hospital. Currently, Dr. Hunt is director of Erie County Community Mental Health services and until April of this year was an assistant commissioner of the State Department of Mental Hygiene. He is also associate clinical professor of psychiatry, University of Buffalo School of Medicine. Dr. Hunt succeeds the late Dr. Oswald A. Kilpatrick, who died in March. As assistant commissioner for nearly five years, he headed the department's division of community mental health services since its inauguration in 1954. Dr. Hunt became a fellow in psychiatry at the Institute of the Pennsylvania Hospital, Philadelphia, in 1934 and was named to the staff of Rochester State Hospital in 1935. He was also a member of the faculty of the University of Rochester School of Medicine and Dentistry. Named director of St. Lawrence State Hospital in March, 1950, Dr. Hunt held that position until his appointment as assistant commissioner of the department in 1952.

New York City

Personal.—Dr. Arthur A. Knapp addressed French Ophthalmologists at La Clinique Nationale Des Quinze-Vingts, Paris, France, June 26, on "Indications for Eye Surgery, the Physiologic Bases." Also, he was invited to give a paper before the Congress of the International Society for the Relief of Crippled Children on July 29.——Martynas Ycas, Ph.D., assistant professor of microbiology, State University College of Medicine, Syracuse, left July 29 for a 10-week visit to Nigeria, Africa. Purpose of his visit is to collect silkworms which produce a particularly simple type of silk, from the chemical point of view. His studies of silk secretion are expected to help understand the chemistry of protein formation. Dr. Ycas, who is making the African trip under a grant from the Lalor Foundation, Wilmington, Del., will spend a portion of his time lecturing at University College, Ibadan, Nigeria, on protein and nucleic acid syntheses.

New Graduate School at Einstein Medical College.—A new graduate school for advanced study and research in the medical sciences will open this fall at the Albert Einstein College of Medicine. Establishment of the school has been made possible through an initial gift of $750,000 by Samuel H. Golding and his son, Herrold R. Golding, of New York. The new school will serve as a memorial to the late Samuel H. Golding's wife, and will be known as the Sue Golding Graduate Division of Medical Sciences. The Golding gift is part of the $25,000,000 development fund program of the College of Medicine, headed by Nathaniel L. Goldstein, former attorney general of the State of New York. The Sue Golding Graduate Division of Medical Sciences will provide advanced study and research training in the medical sciences leading to the Ph.D. degree. Students to qualify must hold a bachelor's degree or its equivalent from a college or university of recognized standing. The program of the graduate division will be closely linked with the pilot training and research program in the study of the nervous system and the behavioral sciences which the College of Medicine is undertaking in cooperation with the National Institute of Mental Health, U. S. Public Health Service. Under this program, subsidies will be available to assist young people to receive training and to enter this field of research. The appointment of an executive committee to administer the graduate school includes the following department heads: Dr. Alfred A. Angrist, pathology; Dr. Alfred Gilman, pharmacology; Dr. Edward James Hehre, microbiology and immunology; and Dr. Abraham White, biochemistry. The new graduate school will be housed in the 10-story Science Building of the college. Basic research will be coordinated with clinical investigation in the 1400-bed Bronx Municipal Hospital Center, which is adjacent to the Medical College and serves as its clinical teaching and research adjunct.

NORTH CAROLINA

Anesthesia Research Grant.—Duke University medical researchers, working under a grant of $133,500, have begun studying the possibility of a link between anesthesia given at childbirth and afflictions such as cerebral palsy, it has been reported. Roland F. Becker, Ph.D., of the Duke Medical School's anatomy department is principal investigator for the project. The three-year grant came from the National Institutes of Health, U. S. Public Health Service.

OHIO

Society News.—At the annual meeting of the Ohio State Radiological Society the following officers were elected for the year 1957-1958: president, Dr. Paul Jones, Zanesville; vice-president and president-elect, Dr. John R. Hannan, Cleveland; secretary, Dr. Francis C. Curtzwiler, Toledo; and treasurer, Dr. Frances A.

Miller, Youngstown. The next annual meeting will be held at the Wade Park Manor Hotel in Cleveland, May 16-18, 1958.

Psychiatric Research Grants.—Receipt of seven U. S. Public Health Service research grants totaling more than $400,000 has been announced by Dr. Ralph Patterson, medical director of the Columbus Psychiatric Institute and Hospital, Ohio State University Health Center. Administered through the National Institutes of Health, Bethesda, Md., the grants will support studies to be carried out by the research division of the psychiatric institute, directed by Dr. Benjamin Pasamanick. The projects, of one to five years' duration, are concerned with prenatal precursors of neuropsychiatric disorder, biosynthesis of neuraminic acid, aging drug effects on normal individuals, development of primate behavior, infantile experience, effects of brain damage, and vector and topographic electroencephalography.

VERMONT

State Medical Society Meeting.—The annual meeting of the Vermont State Medical Society will be held jointly with the New Hampshire Medical Society at the Balsams, Dixville Notch, N. H., Sept. 14-17. Out-of-state speakers include Dr. Richard H. Overholt, Boston; Dr. Charles G. Child, Cornell University Medical College, New York; Dr. Harold Wolff, University of Oklahoma, Oklahoma City; Dr. William Meroney, Boston; Dr. Philip R. McDonald, Wills Eye Hospital, Philadelphia; and Dr. Georges Perera, Columbia University, College of Physicians and Surgeons, New York City. On Sept. 16 a new type of colloquium will be devoted to the problems of the impact of man on man in respect to medicine, health, and disease. On Sept. 17, specialty meetings will be held in medicine, surgery, obstetrics-gynecology, ophthalmology, and radiology. Entertainment includes an annual banquet Sept. 20, with Dr. William A. Pratt as toastmaster. For information write the Vermont State Medical Society, 128 Merchants Row, Rutland, Vt.

WEST VIRGINIA

State Medical Association Meeting.—The 90th annual meeting of the West Virginia State Medical Association will be held at the Greenbrier, White Sulphur Springs, Aug. 22-24. An address will be presented by Dr. Everett L. Gage, of Blue Field, president of the association. Three symposiums are planned: Pediatric Care, moderated by Dr. William A. Thornhill Jr.; Diseases of the Liver, Billiary System, and Pancreas, moderated by Dr. Hampton St. Clair; Obstetrics and Gynecology, moderated by Dr. Seigle W. Parks. Panel discussions including question and answer periods will follow the formal presentations at the general sessions. Dr. David B. Allman, president of the American Medical Association is guest speaker and will address the house of delegates Aug. 24. Technical and scientific exhibits are scheduled. Entertainment includes a reception Aug. 24. Trap and skeet shooting tournaments and golf and tennis tournaments are planned. For information write Mr. Charles Lively, Executive Secretary, West Virginia State Medical Association, 401 Atlas Building, Charleston, W. Va.

GENERAL

Poliomyelitis in Vaccinated Persons.—The Poliomyelitis Surveillance Unit of the Communicable Disease Center reports that, through June 19, 1957, only 42 persons among an estimated 20.2 million who received three injections were reported to have contracted paralytic poliomyelitis in 1956 and 1957 after receiving three injections of the polio vaccine. This number includes two fatalities: one case not fully identified as poliomyelitis which occurred in Indiana in 1956 and one confirmed case which occurred in New Mexico in January, 1957.

Prevalence of Poilomyelitis.—According to the National Office of Vital Statistics, the following number of reported cases of poliomyelitis occurred in the United States, its territories and possessions in the weeks ended as indicated:

Area	July 20, 1957 Paralytic Type	July 20, 1957 Total 1957	July 21, 1956 Total
New England States			
Maine	...	1	...
New Hampshire	...	...	...
Vermont	...	...	...
Massachusetts	1	2	2
Rhode Island	...	...	...
Connecticut	...	3	1
Middle Atlantic States			
New York	3	7	20
New Jersey	...	...	4
Pennsylvania	...	3	5
East North Central States			
Ohio	1	10	17
Indiana	1	4	10
Illinois	6	13	80
Michigan	5	10	10
Wisconsin	...	15	11
West North Central States			
Minnesota	...	2	1
Iowa	1	2	17
Missouri	...	6	19
North Dakota	...	...	...
South Dakota	...	...	...
Nebraska	1	4	3
Kansas	1	4	7
South Atlantic States			
Delaware	...	...	...
Maryland	...	...	4
District of Columbia	...	...	...
Virginia	...	2	4
West Virginia	...	2	6
North Carolina	1	17	7
South Carolina	...	6	6
Georgia	1	2	8
Florida	...	2	14
East South Central States			
Kentucky	3	8	7
Tennessee	2	7	3
Alabama	...	2	2
Mississippi	2	8	7
West South Central States			
Arkansas	...	4	8
Louisiana	3	9	60
Oklahoma	1	14	6
Texas	9	33	61
Mountain States			
Montana	...	1	3
Idaho	1	1	5
Wyoming	...	...	1
Colorado	...	...	2
New Mexico	...	4	1
Arizona	...	2	7
Utah	...	...	6
Nevada	...	...	...
Pacific States			
Washington	...	...	1
Oregon	1	5	5
California	6	37	88
Territories and Possessions			
Alaska	...	...	...
Hawaii	...	...	3
Puerto Rico	2	2	...
Total	52	254	532

Sterility Research Grant.—The Ortho and Carl G. Hartman grants-in-aid of the American Society for the Study of Sterility, each of $500, are available for 1958. Applications should be sent to the chairman, Research Correlating Committee, American Society for the Study of Sterility, Dr. S. Leon Israel, 2116 Spruce St., Philadelphia, by Nov. 30. No application will be considered by the committee unless it is accompanied by three copies of a brief outline of the research project for which the grant-in-aid is being sought.

Medical Writing Contest Winners.—Dr. Wilfred Dorfman, Brooklyn, member of the attending staff of a number of Brooklyn hospitals, has been declared the winner of the 1957 Mississippi Valley Medical Society Essay Contest for his paper, "The Challenge of New Drugs." Dr. Dorfman will present his paper at the 22nd annual meeting of the Mississippi Valley Medical Society to be held at the Hotel Sheraton–Jefferson, St. Louis, Sept. 25-27. He will receive a gold medal, a certificate, and a cash award at the society banquet, Sept. 26. Runner-up in the contest was Dr. Ethan A. Brown, Boston, for his paper, "The Pulmonary Cripple," and the third place winner was Dr. Earl J. Farrell, Newport, Ky., for his paper, "Antenatal Pediatrics in General Practice." Drs. Brown and Farrell will each receive a certificate of award. The winning papers will appear in the January, 1958, issue of the *Mississippi Valley Medical Journal.*

Mississippi Valley Society Meeting.—The 22nd annual meeting of the Mississippi Valley Medical Society will be held at the Sheraton–Jefferson Hotel, St. Louis, Sept. 25-27. More than 40 clinical teachers from medical schools will conduct the program which will include six panel discussions: obstetrics, burns, the acute surgical abdomen, peptic ulcer, chronic diseases in infancy and childhood, and headache. The speakers include Drs. Edgar S. Britnall, Rubin H. Flocks, and Sidney E. Ziffren, of the State University of Iowa, Iowa City; Richard B. Cattell and John R. Graham, of Boston; Russell L. Cecil, Lewis J. Doshay, and Arnold P. Friedman, of New York; Wilfred Dorfman, of Brooklyn; Arkell M. Vaughn, Frank H. Fowler, and Austin E. Smith, of Chicago; James C. Cain and Jacob A. Bargen, of the Mayo Clinic; Edgar H. Little, of New Orleans; Arnold S. Jackson and John L. Sims, of Madison, Wis.; and David W. Robinson and Claude J. Hunt, of Kansas City. There will be technical and scientific exhibits. A special ladies' program is planned. For information write Dr. Harold Swanberg, Secretary, 209-224 W. C. U. Building, Quincy, Ill.

Ultrasonics in Medicine.—The International Congress of Ultrasonics in Medicine, supported by the American Institute of Ultrasonics in Medicine, will be held at the Statler Hotel, Los Angeles, Sept. 6-7. The Disraeli Kobak Memorial Lecture, "Frailty of Man in Flight" will be presented by Capt. Ashton Graybiel, MC, U. S. Navy, director of research School of Aviation Medicine, Pensacola, Florida. The presidential address will be given by Dr. Jerome Gersten, Denver. The following panel discussions will be presented: physical mechanism of the action of ultrasound on tissue, ultrasonics in clinical medicine, use and effects of ultrasonics in dentistry. A roundtable discussion and demonstration of ultrasonics in medicine to be presented Sept. 8 will be moderated by Dr. John H. Aldes, Los Angeles. Foreign speakers include P. Greguss, Ph.D., Budapest, Hungary; Dr. Desider Kamocsay, Budapest, Hungary; Dr. J. Patzold, Erlangen, Germany; Dr. Siegfried Koeppen, Wolfsburg, Germany; J. Jankowiak, Ph.D., Poznan, Poland; Dr. Carlos Bustamente-Ruiz, Lima, Peru; Dr. M. Oka, Osaka, Japan; and Dr. Eugene Weissenberg, San Juan, Puerto Rico. For information write Dr. John H. Aldes, Secretary, American Institute of Ultrasonics in Medicine, Cedars of Lebanon Hospital, 4833 Fountain Avenue, Los Angeles 29, Calif.

Physical Medicine Meeting in Los Angeles.—The 35th annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held in the Statler Hotel, Los Angeles, Sept. 8-13. An address will be presented by Dr. Murray B. Ferderber, president, American Academy of Physical Medicine and Rehabilitation. Special scientific film sessions will include the following colored films: Progressive Ambulation Training, Gait Studies of the Severely Handicapped Hemiplegic Patient, Home Care—An Approach to the Treatment of Chronic Disease, Use of Resistive Training in Ambulation Training, and Motion Patterns Used in Neuromuscular Re-Education. Papers to be presented by foreign authors include the following:

The Problem of Paralytic Dislocation of the Hip in the Rehabilitation of Children with Poliomyelitic Sequelae, Dr. Alfonso Tohen Zamudio, Dr. Luis Rojas, Dr. Luis Ibarra, Hospital Infantil de Mexico, Mexico City.

Mexican Efforts in the Field of Rehabilitation of its Disabled, Dr. Jose Ibarra, Dr. David Amato, Mexico City.

The seventh John Stanley Coulter Memorial Lecture will be given by Fred B. Moor, medical director, School of Physical Therapy, College of Medical Evangelists, Los Angeles. Scientific and technical exhibits will be on display. For information write the American Academy of Physical Medicine and Rehabilitation, 30 N. Michigan Ave., Chicago 2.

Cardiovascular Research Fellowships.—Applications by research investigators for support of projects to be developed during the fiscal year beginning July 1, 1958, are being accepted by the American Heart Association. The deadline for research fellowship applications and established investigatorships is Sept. 15; applications for grants-in-aid must be made by Nov. 1. Funds for association-supported research in the cardiovascular field are provided by public contributions to the Heart Fund. At least half of all funds received by the association's National Office are allocated to research. Applications may be made for awards in the following categories:

Established Investigatorships: Awarded for periods of up to five years, subject to annual review, in amounts from $6,000 to $8,000 yearly, to scientists who have developed in their research careers to the point where they are independent investigators.

Research Fellowships: Awarded to young men and women with doctoral degrees for periods of one or two years to enable them to train as investigators under experienced supervision. Annual stipends range from $3,800 to $5,700.

Advanced Research Fellowships: Are to be awarded for the first time next year for periods of one or two years to post-doctoral applicants who have had some research training and experience but who are not yet clearly qualified to conduct their own independent research. They will be permitted to spend up to 25% of their time in professional and scientific activities not strictly of research nature, providing that these will contribute to their professional development and do not involve services for a fee. These new stipends range from $4,600 to $6,500 annually.

Grants-in-Aid: Made to experienced investigators to provide support for specified projects.

Information may be obtained from the Medical Director, American Heart Association, 44 East 23rd St., New York 10, N. Y.

FOREIGN

International Medical Press Meeting.—The third congress of the International Union of the Medical Press will be held in London, Sept. 13-15 under the sponsorship of the Union Internationale de la Presse Médicale and the Press Medical Association. Meetings will be held in the British Medical Association House. Topics include the press and medicine, the editor and the author, illustrations in medical journals, standardization of format and bibliographical references, abstract or digest?, editorial responsibility for medical advertisements, the place of the specialist journal in medical literature, multilingual summaries of medical articles. Speakers from Austria, France, Scotland, England, Denmark, Norway, Germany, and the United States will make presentations. A banquet will be held Sept. 13. For information write the Organizing Secretary, London Congress of the Union Internationale de la Presse Médicale, % British Medical Journal, B. M. A. House, Tavistock Square, London, W.C.1, England.

World Medical Association Meeting.—The 11th general assembly of the World Medical Association will convene in Istanbul, Turkey, Sept. 29-Oct. 5, in the Conference Hall, Faculty of Science, University of Istanbul. The theme of the assembly, celebrating its first decade of activity, will be "Solidarity—The Key to Medical Advancement." Program topics will include: Utilization of the Hospital in Providing Medical Care, Protection for the Civilian Medical Team in Times of Armed Conflict, and the Interdependence of the Medical and Pharmaceutical Professions. There will be a medical editor's meeting at which "The Role of the Medical and Lay Press in Health Education of the Public" and "Integration of Medical Journals to Reduce the Number and Improve Content" will be discussed. The Scientific Session will include "Advancements in Medical Practice in Turkey." The World Medical Association, an international organization of national medical associations, includes 53 national medical associations of the free world, representing more than 700,000 doctors. For information write the World Medical Association, 10 Columbus Circle, New York 19, N. Y.

CORRECTIONS

Brig. Gen. Eugen G. Reinartz.—The item in THE JOURNAL, Aug. 3 issue, page 1600, entitled "Three Officers Receive Awards" erroneously stated that Brig. Gen. Eugen G. Reinartz was a past-president of the American Medical Association, whereas, the item should have read that Brig. Gen. Reinartz was a past-president of the Aero Medical Association.

Intravenous Urography.—In the Query and Minor Note entitled "Intravenous Urography" in the July 20, 1957, issue of THE JOURNAL, page 1417, the 16th line of the last paragraph of this query should have read "100 mg. of hydrocortisone" instead of "100 Gm. of hydrocortisone."

EXAMINATIONS AND LICENSURE

BOARDS OF MEDICAL EXAMINERS

CALIFORNIA: *Written Examination.* Los Angeles, Aug. 19-22; Sacramento, Oct. 21-24. *Oral Examination.* Los Angeles, August 17; San Francisco, Nov. 16. *Oral and Clinical for Foreign Graduates.* Los Angeles, Aug. 18; San Francisco, Nov. 17. Sec., Dr. Louis E. Jones, 1020 N St., Sacramento 14.

DISTRICT OF COLUMBIA:* *Reciprocity.* Washington, Sept. 9. *Examination.* Washington, Nov. 12-13. Deputy Director, Mr. Paul Foley, 1740 Massachusetts Ave., N.W., Washington, D. C.

GEORGIA: *Examination.* Atlanta, Oct. 8-9. *Reciprocity.* Atlanta, Oct. 10. Sec., Mr. Cecil L. Clifton, 111 State Capitol, Atlanta 3.

MINNESOTA:* *Examination and Reciprocity.* Minneapolis, Oct. 15-17. Sec., Dr. F. H. Magney, 230 Lowry Medical Arts Bldg., St. Paul 2.

MONTANA: *Examination and Reciprocity.* Helena, Oct. 1-2. Sec., Dr. Thomas L. Hawkins, 555 Fuller Ave., Helena.

NEW HAMPSHIRE: *Examination and Reciprocity.* Concord, Sept. 11-13. Sec., Dr. John S. Wheeler, 107 State House, Concord.

OKLAHOMA: *Examination.* Oklahoma City, Dec. 14-15. Sec., Dr. E. L. Lester, 813 Braniff Bldg., Oklahoma City.

VIRGINIA: *Reciprocity.* Richmond, Dec. 4. *Examination.* Richmond, Dec. 5-7. Address: Office of the Secretary, 631 First St., S.W., Roanoke.

ALASKA:* On application in Anchorage and Juneau. Sec., Dr. W. M. Whitehead, 172 South Franklin St., Juneau.

GUAM: *Subject to Call.* Act. Sec., Dr. S. F. Provencher, Agana.

PUERTO RICO: *Examination.* San Juan, September 4. Sec. Mr. Joaquin Mercado Cruz, Box 9156, Santurce.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

ARKANSAS: *Examination.* Little Rock, Oct. 7-8. Sec., Mr. S. C. Dellinger, Zoology Department, University of Arkansas, Fayetteville.

COLORADO: *Examination and Reciprocity.* Denver, Sept. 4-5. Sec., Dr. Esther B. Starks, 1459 Ogden St., Denver 18.

DISTRICT OF COLUMBIA: *Examination.* Washington, Oct. 21-22. Deputy Director, Mr. Paul Foley, 1740 Massachusetts Ave., N. W., Washington, D. C.

MICHIGAN: *Reciprocity.* Ann Arbor, Sept. 7. *Examination.* Ann Arbor and Detroit, Oct. 11-12. Sec., Mrs. Anne Baker, 116 Stevens T. Mason Bldg., West Michigan Ave., Lansing.

NEVADA: *Examination.* Reno, Sept. 3. Sec., Dr. Donald G. Cooney, Box 9005, University of Nevada, Reno.

OKLAHOMA: *Examination.* Oklahoma City, Sept. 27-28. Sec., Dr. E. F. Lester, 813 Braniff Bldg., Oklahoma City.

RHODE ISLAND: *Examination.* Providence, Aug. 28. Administrator of Professional Regulation, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

TEXAS: *Examination.* Austin, October. *Waiver and Reciprocity.* Meeting 1st and 15th of each month. Sec., Brother Raphael Wilson, 407 Perry Brooks Bldg., Austin.

WISCONSIN: *Examination.* Madison, Sept. 20 and Milwaukee, Dec. 7. Sec., Mr. William H. Barber, 621 Ransom St., Ripon

*Basic Science Certificate required.

DEATHS

Metcalfe, Raymond Franklin, Brigadier General, U. S. Army, retired; born in Salamanca, N. Y., in 1877; University of Buffalo School of Medicine, 1900; appointed an assistant surgeon in the Army in 1901; served in the Philippines, where he assisted in stamping out a cholera epidemic on Leyte; during World War I served in France in the Oise–Aisne and Meuse–Argonne operations; for service in connection with suppression of influenza epidemic in the American Expeditionary Force was awarded the Distinguished Service Medal; from 1920 to 1927 was chief of surgical service at the Station Hospital, Fort Sam Houston, Texas, and later commanded Tripler General Hospital, Honolulu, T. H.; chief of surgical service at Walter Reed Army Hospital, Washington, D. C., 1935-1936; named commanding officer of Walter Reed Army Medical Center, Washington, D. C., serving in that capacity from 1939 to 1941, when he retired from active duty; shortly after Pearl Harbor, was recalled and during World War II commanded all Army medical facilities on the West Coast, retiring again in 1946; service member and in 1926 member of the House of Delegates of the American Medical Association; fellow of the American College of Surgeons; died in the Army and Navy Hospital, Hot Springs, Ark., May 8, aged 79, of acute peritonitis, peritoneal abscesses, myocardial infarction, and cerebral arteriosclerosis.

Whitmore, Eugene Randolph ⊕ Colonel, U. S. Army, retired, Washington, D. C.; born in Lancaster, Wis., June 18, 1874; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1899; appointed assistant surgeon in 1901, with the rank of first lieutenant in the U. S. Army; served as professor of pathology at the Army Medical School, as professor of tropical medicine and curator at the Army Medical Museum, and as pathologist at the Bureau of Science, Manila, P. I.; retired from active military duty in 1920; veteran of World War I; professor of pathology emeritus, Georgetown University School of Medicine; at one time professor of bacteriology and preventive medicine at George Washington University Medical School; formerly on the faculty of his alma mater; specialist certified by the American Board of Pathology; served as secretary of the American Association for the Study of Neoplastic Diseases; member of the American Association of Pathologists and Bacteriologists, College of American Pathologists, and the American Society of Clinical Pathologists; fellow of the American College of Physicians; headed the division of tropical diseases at Doctors Hospital; directed the pathology laboratories at Casualty Hospital, where he was senior pathologist and consultant; died in the Walter Reed Army Hospital May 4, aged 82.

Cadwalader, William Biddle, Philadelphia; born July 9, 1876; University of Pennsylvania Department of Medicine, Philadelphia, 1902; emeritus professor of neurology at his alma mater; an associate member of the American Medical Association; past-president of the American Neurological Association and the Philadelphia Neurological Society; for many years president and at one time vice-president and secretary of the Philadelphia Zoological Society; veteran of the Spanish–American War; served in France during World War I; author of "The Diseases of the Spinal Cord"; received an honorary degree of doctor of science from the University of Pennsylvania in 1952; long associated with the Presbyterian Hospital, University Hospital, and the Bryn Mawr (Pa.) Hospital, where he died May 31, aged 80.

Moruzi, Alexandre Demitrio, Kansas City, Mo.; born in Bucharest, Rumania, Feb. 18, 1900; Université de Paris Faculté de Médecine, France, 1929; chief of the Rumanian Red Cross motorized hospital during World War II; served as head surgeon in the "Caritate" Hospital of Iasi, Rumania, and as chief of a surgical department in the Hospital "Los Andes," Merida, Venezuela; formerly assistant professor of surgery in Bucharest, Rumania, and neurology at Iasi, Rumania; at one time professor of surgery at the School of Medicine in Iasi, Rumania, and professor of surgery at the School of Medicine in Merida, Venezuela; an assistant surgeon, Missouri Pacific Hospital Association; associated with St. Mary's Hospital, where he served an internship, and where he died May 3, aged 57.

Witherspoon, Thomas Casey, Los Angeles; born in Natchez, Miss., May 25, 1868; Missouri Medical College, St. Louis, 1889; member of the Western Surgical Association; fellow and a founder of the American College of Surgeons; veteran of World War I; served on the faculty of Marion Sims College of Medicine and St. Louis Medical College in St. Louis, where he was on the staff of the Missouri Baptist Hospital; past-president of the Montana Medical Association; at one time practiced in Butte, Mont., where he was on the staff of the Murray Hospital, an early member of the Chamber of Commerce, and a charter member and first president of the Butte Rotary Club; died May 15, aged 88.

Mogabgab, Anees, New Orleans; born in Mt. Lebanon, Syria, Sept. 5, 1893; Tulane University of Louisiana School of Medicine, New Orleans, 1919; service member of the American Medical Association; an associate, American College of Physicians; lecturer in medicine at his alma mater; veteran of World War II; National Guardsman; on March 19, 1952, was awarded the Louisiana longevity medal for 25 years' service as a guardsman; on Feb. 14, 1954, was presented the Louisiana Distinguished Service medal on the 116th anniversary of the Washington Artillery; manager of the Veterans Administration Hospital, where he died April 18, aged 63, of terminal bronchopneumonia and cancer of the pancreas.

⊕ Indicates Member of the American Medical Association.

Lewi, Maurice J. ✦ New York City; born in Albany Dec. 1, 1857; Albany Medical College, 1877; at one time on the faculty of his alma mater and professor of medical jurisprudence at the Albany Law School; served as chairman of the committee on medical legislation of the Medical Society of the State of New York, as president of the Medical Society of the County of Albany, and as secretary of the New York State Board of Medical Examiners; president of the first Institute of Podiatry, now known as the New York College of Podiatry, and Foot Clinics; author of several books on chiropody and podiatry; died May 27, aged 99.

Murphy, Robert Gordon ✦ Providence, R. I.; born in Providence Feb. 26, 1907; McGill University Faculty of Medicine, Montreal, Que., Canada, 1933; specialist certified by the American Board of Internal Medicine; fellow of the American College of Physicians; treasurer of the Providence Medical Association; veteran of World War II; interned at the Charles V. Chapin Hospital; associated with the Rhode Island Hospital, where he served an internship and residency; on the staffs of the Roger Williams General, Providence Lying-In and St. Joseph's hospitals; attending physician at the Veterans Administration Hospital, where he died May 6, aged 50.

Greenebaum, Regina Stolz, Pittsburgh; born in Chicago March 17, 1904; Rush Medical College, Chicago, 1933; specialist certified by the American Board of Internal Medicine; member of the American College of Chest Physicians; service member of the American Medical Association; member of the faculty of the University of Pittsburgh School of Medicine; formerly on the faculty of Northwestern University Medical School in Chicago; served during World War II; associated with the Veterans Administration Hospital, where she died June 7, aged 53, of carcinoma of the pancreas.

Hamilton, Richard Gillespie ✦ Pittsburgh; born in Roswell, N. M., Dec. 12, 1908; University of Pittsburgh School of Medicine, 1933; associate professor of rhinolaryngology at his alma mater; specialist certified by the American Board of Otolaryngology; member of the American Academy of Ophthalmology and Otolaryngology, American Society of Ophthalmology and Otolaryngologic Allergy, and the American College of Allergists; fellow of the American College of Surgeons; served on the staffs of Eye and Ear, St. Francis, and Elizabeth Steel Magee hospitals; died May 22, aged 48, of a heart attack.

Maun, Mark Emmett ✦ Detroit; born in Laurel, Nebr., April 8, 1910; Northwestern University Medical School, Chicago, 1937; specialist certified by the American Board of Pathology; member of the American Association of Pathologists and Bacteriologists and the College of American Pathologists; formerly associate professor of pathology at Wayne University College of Medicine; served as consulting pathologist at Jennings, St. Joseph, Deaconess, and old St. Mary's hospitals; associated with Doctors Hospital and St. Clair Hospital; director, Metropolitan Hospital, where he died May 20, aged 47, of cancer.

Melson, Oliver Clarence ✦ Little Rock, Ark.; born in Conneaut, Ohio, Oct. 8, 1891; Western Reserve University School of Medicine, Cleveland, 1916; clinical professor of medicine at the University of Arkansas School of Medicine; specialist certified by the American Board of Internal Medicine; veteran of World War I; fellow of the American College of Physicians, of which he was an ex-governor; served on the staff of the Mayo Clinic in Rochester, Minn.; chief of staff, St. Vincent Infirmary; an attending physician at Arkansas Baptist Hospital; died in Pittsburgh April 30, aged 65.

Band, Alice Messinger, Baltimore; born in Rochester, N. Y., Feb. 2, 1926; Boston University School of Medicine, 1949; interned at the Gallinger Municipal Hospital in Washington, D. C., where she served a residency; formerly a resident at the Georgetown University Hospital in Washington, D. C.; associated with the University Hospital; associate in medicine at the University of Maryland School of Medicine; certified by the National Board of Medical Examiners; died in Rochester, N. Y., June 9, aged 31, of cancer of the pancreas.

Hough, William Hite ✦ De Land, Fla.; Georgetown University School of Medicine, Washington, D. C., 1904; member and past-president of the Medical Society of the District of Columbia; formerly on the faculty of George Washington University School of Medicine in Washington, D. C., and at his alma mater; served on the staffs of Episcopal Eye, Ear and Throat Hospital, St. Elizabeths Hospital, and Garfield Memorial Hospital in Washington, D. C.; died May 26, aged 79, of cancer.

Woolston, William Henry ✦ Albuquerque, N. M.; Northwestern University Medical School, Chicago, 1915; fellow of the American College of Surgeons; past-president of the Southwestern Medical Association; served on the faculty of his alma mater; veteran of World War I; associated with St. Joseph Sanatorium and Hospital; consultant, Veterans Administration Hospital; formerly director of the Presbyterian Hospital Center, where he died May 10, aged 66, of coronary arteriosclerosis.

Weil, Arthur Isadore ✦ New Haven, Conn.; University and Bellevue Hospital Medical College, New York City, 1914; veteran of World War I; formerly member of the board of health of New York City; for many years associated with the U. S. Public Health Service as medical officer in charge of the New Haven area; served overseas during World War I; on the staff of the Grace–New Haven Hospital; died in the Memorial Hospital, New York City, May 5, aged 69, of pneumonia, following a cystectomy.

Golenkow, Valerian Gregoir, Cassville, N. J.; Thüringische Landesuniversitat Medizinische Fakultät, Jena, Thuringia, Germany, 1912; died March 24, aged 72, of cerebral hemorrhage and arteriosclerosis.

Goodman, Daniel Carson, Flemington, N. J.; Washington University School of Medicine, St. Louis, 1905; novelist and motion picture executive and author; consultant on the staff of the Hunterdon Medical Center, where he died May 16, aged 74.

Greenland, Frances ✦ Staten Island, N. Y.; New York Medical College, Flower and Fifth Avenue Hospitals, New York City, 1943; certified by the National Board of Medical Examiners; interned at the Staten Island Hospital, where she was a member of the staff; served a residency at the New York Infirmary for Women and Children; died May 23, aged 58.

Gudenkauf, August Bernard, Sidney, Ohio; Ohio Medical University, Columbus, 1905; president of the board of directors of the Mutual Federal Savings Loan Association; died April 30, aged 86, of coronary thrombosis.

Haas, Lewis Lajos ✦ Chicago; Magyar Királyi Pázmány Petrus Tudományegyetem Orvosi Fakultasa, Budapest, Hungary, 1918; associate professor of radiology at the University of Illinois College of Medicine; killed June 2, aged 63, when he was struck by an automobile as he was crossing a highway near Neuville, 15 miles east of Quebec, while on a vacation.

Hair, Charles H., Chicago; Jenner Medical College, Chicago, 1910; died March 7, aged 80.

Halpin, Raymond William ✦ Chicago; Stritch School of Medicine of Loyola University, Chicago, 1950; interned at the Cook County Hospital; veteran of World War II; his affiliation with the U. S. Public Health Service Reserve terminated July 1956; on the staff of the Mercy Hospital; died in the Loretto Hospital June 2, aged 34, of injuries received in an automobile accident.

Hanson, Estelle C. Merrill, Pasadena, Calif.; Woman's Medical College of the New York Infirmary for Women and Children, New York City, 1891; died May 19, aged 95, of arteriosclerosis.

Harsh, Enoch Herbert, Minerva, Ohio; Baltimore Medical College, 1901; member of the American Urological Association, served on the staffs of St. Luke's and Lakeside hospitals in Cleveland; died in Alliance (Ohio) City Hospital April 17, aged 80, of coronary occlusion.

Harten, Max ✦ Brooklyn; Long Island College of Medicine, Brooklyn, 1934; specialist certified by the American Board of Internal Medicine; member of the American Academy of Allergy; fellow of the American College of Physicians; associated with North Shore Hospital in Manhasset, N. Y., the Kings County Hospital, and Brooklyn Jewish Hospital, where he died May 24, aged 51.

Hawk, Luther Kahale, Chattanooga, Tenn.; Chattanooga Medical College, 1904; died April 28, aged 78, of hypertension and arteriosclerosis.

Heath, Llewellyn F., Georgetown, Ky.; Hospital College of Medicine, Louisville, 1904; an associate member of the American Medical Association; formerly deputy coroner of Scott County; died in Lexington May 13, aged 85.

Henderson, Thomas Martin, San Diego, Calif.; University of Louisville (Ky.) Medical Department, 1893; died in National City, March 27, aged 84.

Henry, Gordon Fuller, West Palm Beach, Fla.; Medical Department of Tulane University of Louisiana, New Orleans, 1910; member of the Florida Medical Association; an honorary member of the board of directors of Good Samaritan Hospital; died April 25, aged 71, of cerebrovascular accident.

Herkness, John Stoddart ✦ Mount Union, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1910; school medical inspector for many years; a member of the board of health; consultant on the staff, J. C. Blair Memorial Hospital, Huntingdon; a director of the Central National Bank of Mount Union; died in the Lewistown (Pa.) Hospital May 18, aged 70.

Hexom, John Daniel, Decorah, Iowa; State University of Iowa College of Medicine, Iowa City, 1905; on the staff of the Decorah Hospital; died March 19, aged 78, of cancer.

Higdon, Thomas L., Wayside, Md.; Baltimore University School of Medicine, 1897; an associate member of the American Medical Association; died in Arlington, Va., March 9, aged 88, of carcinoma of the stomach.

Hoeffler, John Conrad, Newark, N. Y.; University of Buffalo School of Medicine, 1906; veteran of World War I; for many years member of the medical staff of the Newark State School; died May 18, aged 81, of coronary occlusion.

Hollander, Samuel, New York City; Cornell University Medical College, New York City, 1906; served briefly with the New York City Department of Health; died in the Beth Israel Hospital May 21, aged 74, of cardiovascular arteriosclerosis.

Howell, William Edward ✦ Haleyville, Ala.; Birmingham Medical College, 1900; served as mayor and as chairman of the school board; died May 16, aged 89, of intestinal hemorrhage.

Huber, John George, Evansville, Ind.; Baltimore Medical College, 1898; veteran of the Spanish–American War and World War I; served as jail physician and county health officer; died May 10, aged 82, of arteriosclerosis.

Huffnagle, Milford J. ✦ Philadelphia; University of Pennsylvania School of Medicine, Philadelphia, 1931; on the staff of the Germantown Hospital; died May 10, aged 51, of coronary occlusion.

Irwin, Robert Sloan ✦ Denver; Maryland Medical College, Baltimore, 1904; died in the Presbyterian Hospital May 16, aged 86, of coronary infarction.

Jackson, Andrew Joseph ✦ Waterbury, Conn.; College of Physicians and Surgeons, Baltimore, 1915; member of the Industrial Medical Association; fellow of the American College of Surgeons; past-president of the Waterbury Medical Society and the New Haven County Medical Society; veteran of World War I; associated with St. Mary's and Waterbury hospitals; died May 16, aged 64, of coronary disease.

Jackson, Gustavus Brown, Santa Monica, Calif.; Rush Medical College, Chicago, 1902; fellow of the American College of Surgeons; an associate member of the

American Medical Association; veteran of World War I; for many years practiced in Indianapolis, where he was president of the board of health; died May 8, aged 79.

Jackson, Kenneth Pope ✠ Bremerton, Wash.; Rush Medical College, Chicago, 1938; on the staff of the Harrison Memorial Hospital; died May 5, aged 51.

Jackson, Tatum W. ✠ Manchester, Ga.; Atlanta School of Medicine, 1909; died April 30, aged 82, of bronchopneumonia and cerebral hemorrhage.

Jacobs, William Frank, Daytona Beach, Fla.; Homeopathic Medical College of Missouri, St. Louis, 1907; for many years medical superintendent of the Bellevue Hospital in New York City; died May 14, aged 72, of coronary occlusion.

Johnson, Charles Edwin, Homer, Ill.; Marion–Sims College of Medicine, St. Louis, 1897; died in Kankakee May 18, aged 84, of arteriosclerotic heart disease.

Joseph, Louis David ✠ Los Angeles; University of Illinois College of Medicine, Chicago, 1931; at one time practiced in Chicago, where he was associated with the Edgewater Hospital; on the staff of the Cedars of Lebanon Hospital; died May 21, aged 49.

Kemp, John N. ✠ Saginaw, Mich.; St. Louis College of Physicians and Surgeons, 1895; served as health officer and as a member of the school board; for many years on the staff of the Saginaw County Infirmary Hospital; on the staffs of St. Mary and Saginaw General hospitals; died April 20, aged 84, of chronic myocarditis.

King, Earl Beardsley ✠ San Francisco; University of California School of Medicine, San Francisco, 1931; assistant professor of obstetrics and gynecology at his alma mater; specialist certified by the American Board of Obstetrics and Gynecology; chief of obstetrics and gynecology at the San Francisco Hospital; died in the Herbert C. Moffitt Hospital May 14, aged 50, of carcinoma of the pancreas.

Levy, Moses Solomons ✠ Smyrna, Ga.; University of Georgia Medical Department, Augusta, 1906; served on the faculty of his alma mater; in 1916 commanding officer of the Old Georgia Hussars on the Mexican Border; veteran of World War I; at one time associated with the Veterans Administration in Augusta, Ga.; member of the Association of Military Surgeons of the United States; died in Kennestone Hospital, Marietta, May 23, aged 71, of a heart attack.

Lippincott, Walter Maynard, Lynbrook, N. Y.; Harvard Medical School, Boston, 1900; formerly on the faculty of New York Post-Graduate Medical School and Hospital; veteran of World War I; served on the staffs of the Meadowbrook Hospital in Hempstead, Nassau Hospital in Mineola, Mercy Hospital in Rockville Centre, and the South Nassau Communities Hospital in Oceanside; died May 15, aged 84.

O'Donnell, William Francis ✠ Washington, D. C.; Georgetown University School of Medicine, Washington, 1913; professor of pediatrics emeritus at his alma mater; specialist certified by the American Board of Pediatrics; member of the American Academy of Pediatrics; fellow of the American College of Physicians; served overseas during World War I; associated with Children's, Georgetown University, and Providence hospitals; died April 27, aged 64, of uremia.

Openshaw, Eli Carlos ✠ Salt Lake City, Utah; College of Physicians and Surgeons, Little Rock, 1911; formerly practiced in Santaquin, where he served as mayor; died in the Latter Day Saints Hospital April 10, aged 85.

Roberts, William Burchard ✠ Minneapolis; Hahnemann Medical College and Hospital of Philadelphia, 1901; veteran of World War I; died May 8, aged 81, of cerebral hemorrhage and myocardial insufficiency.

Roop, Frank Sidney, Blacksburg, Va.; University of Virginia Department of Medicine, Charlottesville, 1900; died March 14, aged 88, of rheumatic heart disease.

Royce, Harold Thomas, St. Petersburg, Fla.; University of Toronto Faculty of Medicine, Toronto, Ontario, Canada, 1906; fellow of the American College of Surgeons; died April 14, aged 76, of carcinoma of the kidney with metastasis.

Ryan, Michael D. ✠ Saginaw, Mich.; Queen's University Faculty of Medicine, Kingston, Ontario, Canada, 1891; at one time county coroner and city health officer; for many years associated with St. Mary's Hospital; died April 18, aged 89, of acute pulmonary congestion and arteriosclerosis.

Scarboro, Edwin Rutherford, Fresno, Calif.; University of Michigan Medical School, Ann Arbor, 1917; an associate member of the American Medical Association; fellow of the American College of Surgeons; veteran of World War I and won the Croix de guerre for heroism under fire in the Meuse–Argonne offensive; at one time on the faculty of his alma mater; died May 8, aged 66.

Simmons, John Walter, Simpson, Kan.; Kansas Medical College, Medical Department of Washburn College, Topeka, 1897; died May 9, aged 85.

Steinmetz, Charles Gordon Jr., Philadelphia; Medico-Chirurgical College of Philadelphia, 1910; an associate member of the American Medical Association; veteran of World War I; served on the staffs of Presbyterian and Woman's hospitals; died in the Jefferson Hospital May 28, aged 69.

Thomson, Thomas Leonard ✠ Torrington, Conn.; Hahnemann Medical College and Hospital of Philadelphia, 1901; past-president of the Torrington and Litchfield County Medical societies; formerly vice-president of the Connecticut State Medical Society; associated with the Charlotte Hungerford Hospital, where he died April 18, aged 84, of bronchopneumonia and carcinoma of the lungs.

Timerman, Arthur Rood ✠ St. Joseph, Mo.; Louisville (Ky.) Medical College, 1894; past-president of the Buchanan County Medical Society; died in Ocala, Fla., May 18, aged 83

FOREIGN LETTERS

AUSTRIA

Undescended Testis.—At the meeting of the Vienna Society for Pediatrics, in May, R. Jonas discussed the cause, diagnosis, and treatment of cryptorchism. False cryptorchism is a simple arrest of testicular development. Spontaneous descent of the testis may occur between the ages of 12 and 17 years in patients with this condition. This descent is explained by the excretion of gonadotropin during puberty. True cryptorchism is a genetic disturbance, frequently associated with other malformations such as delayed fetal development of the sex organs which results in intersexual manifestations. A boy with false cryptorchism should be operated on in the 12th to 16th year and with true cryptorchism in the 6th to 8th year so that the pathologically changed testis can develop in the right place. An exact diagnosis is most important. Association with hernia, inguinal pains, such rare complications as torsion of the spermatic cord, and every form of ectopia are also indications for operation.

Tuberculosis of the Bones and Joints.—At the same meeting, O. Ruziczka said that he had treated, with tuberculostatic drugs, 48 children aged from infancy to 14 years who had tuberculosis of the bones and joints. Treatment with these drugs can cure patients with the proliferative-granulating form of the disease if it is diagnosed and treated early. The regenerative power of the bones is good in this age group. Removal of the focus and follow-up after tuberculostatic treatment are necessary in patients with larger necrotic foci associated with caseation. Of the 48 children, 13 were cured by general treatment and tuberculostatic drugs. No recurrence was seen in follow-up examinations up to nine years later. In 13 children removal of the focus was performed, and 3 others were given local antibiotic injections. Tuberculous meningitis occurring simultaneously caused death in two patients. Patients with uncomplicated synovial tuberculosis also showed good results with conservative tuberculostatic treatment. Pyarthrosis must also be locally treated with the aid of injections or, after operation, with tuberculostatic drugs. Tuberculous fistulas may close after a favorable influence on the basic osseous process. In three patients they had remained closed for eight or nine years when last seen. If they do not close, they must be excised. Old proved methods of treatment as well as new possibilities of treatment have improved the prognosis of infantile tuberculosis of the bones and joints and shortened the duration of treatment. A cure can be obtained with restoration of normal position, form, and function.

The items in these letters are contributed by regular correspondents in the various foreign countries.

CANADA

Tax Relief on Pension Contributions.—For some time, several of the professional associations of Canada have been requesting the Minister of Finance to defer taxes on pension contributions by the self-employed. Professional men, particularly those in private medical practice, were concerned with the problem of no tax relief on money set aside for a pension plan to provide for their old age, whereas employees in firms with pension plans enjoyed tax relief on such contributions. The minister of finance has now relented and permitted new arrangements closely in line with the recommendations of the Canadian Medical Association. From next January, self-employed taxpayers may claim as deductions from earned incomes sums up to 10% of their income contributed to approved annuities or other specified forms of retirement funds. Employed taxpayers who are already participating in a pension plan may supplement their present coverage by a separate annuity contract and may deduct personal contributions. The way is also open for professional organizations such as the Canadian Medical Association to provide a trusteed fund for their members out of which an immediate annuity may be purchased at the age of retirement.

Aminopterin Sodium as an Abortifacient.—Bourne and co-workers (*Canadian Medical Association Journal*) report a case in which grave illness was produced by the attempts of a pregnant woman to abort herself by taking aminopterin sodium. She bought 100 tablets and took 8 (4 mg.) on one day, 8 the next day, and 4 the next day. She had thus ingested a total of 20 tablets or 10 mg. of aminopterin, according to her own statement, but she may have taken more. Next day she developed a severe sore throat and later a diffuse erythema of the entire face with swelling and vesicle formation and an inflammatory reaction of the lips and gums. The entire oral cavity and pharynx were tender and the patient was in severe distress. When she was admitted to the hospital, abortion was taking place and the toxic effects of the drug were evident in lesions of the face, mouth, chest, and abdominal skin, but there was never any evidence of suppression of hematopoiesis. She also suffered from temporary loss of hair. Immediately after admission, treatment with a specific antidote, citrovorum factor (0.5 mg. twice a day) was started. The patient was also given penicillin and streptomycin. Her symptoms subsided slowly, and it is thought that administration of the antidote may have saved the patient's life or at least hastened recovery.

Control of Medical Care.—At the meeting of the Canadian Public Health Association in Toronto in May, Dr. Matthews of the Saskatchewan Department of Health discussed the control of the quality of medical care. He noted that in the Health Insurance Plan of Greater New York, control is accomplished by the

insurance agency and involves the use of a closed panel of physicians. Dr. Matthews believes that it would be better if controls were exercised by the physicians themselves. In Canada, more confidence is placed on the results of examination of physicians by provincial licensing authorities and by the Medical Council of Canada. If insurance agencies were to make a further distinction between physicians fit to practice and those unfit, they would not necessarily raise the standards of those they excluded but simply segregate them from their fellows. In any health insurance plan, a probationary period for a participating physician is of value. If every insurance agency were to set its own standards, confusion would result. It is important that administrators of all insurance plans cooperate with the medical profession in insuring standards and indicating to the profession where such standards need tightening up. Few evaluations of medical care have been made in Canada, and those few were usually made to solve a particular problem rather than to be on a continuing basis. Administrators of hospital insurance plans tend not to care whether their clients are treated in hospitals giving good quality care. With the forthcoming extension of hospital insurance in Canada, it would be natural to expect that payments by the government would be limited to hospitals known to maintain good standards of care. Good results have been obtained with prepaid medical care in a Saskatchewan area in which an active assessment committee was elected by the medical profession of the area and granted broad powers by the district medical society. This assessment committee had done a great deal of good in raising standards.

The cost of medical care in a well-known prepaid plan in Ontario was analyzed by another speaker who showed that between 1930 and 1953, whereas personal expenditures in Canada had increased substantially for tobacco, alcohol, and transportation, expenditures on personal medical care had not increased relatively. Between 1946 and 1953, the income of Canadian physicians in private practice has remained at a constant 1% of the total assessed income of all the taxpayers in Canada. Other statistics prove that the net annual income of physicians in Canada between 1950 and 1954 increased roughly parallel with the average weekly income of industrial workers. It has certainly not increased beyond that. Hence, over these years, physicians are relatively as well off as industrial workers. In the plan analyzed in Ontario, annual costs per 1,000 participants and utilization rates have increased steadily from 1949 to 1956. The utilization rate has increased from 2,300 to nearly 3,900 persons per year. The increase in costs appears to be due to increased services, increases in fee schedules, and increases in the proportion of expensive services, mainly surgical. Although it is unlikely that medical need has increased in the last few years among the population covered by this plan, it would seem that the more prosperous and leisured a society becomes, the more it worries about its health. The situation is reasonable if the insurance plan is a voluntary one, otherwise there is a danger that excessive demands will be made on the medical profession without an increase in income, as has happened in the United Kingdom.

This speaker also described a system developed in this health plan for sharing costs and number of services between physicians in the same county. Where a physician consistently shows high average costs and a high rate of service, the amount payable to him may be subject to control, but few physicians in Ontario have been placed on this control system. A general practitioner remarked that there will always be variations in costs of medical care from patient to patient and from physician to physician. He called for an analysis of physicians' expenses, an increasing item in the provision of medical care. He also said that the profession must either give leadership or like what it gets in the health insurance plan.

Hospital Bed Requirements.—The Canadian Public Health Association discussed planning for hospital bed requirements at its annual meeting. Mr. John Osborne of the Ottawa Department of National Health and Welfare said there was a great variation in hospital beds per 1,000 population among Canadian provinces. In post-war surveys it was found that the number of beds for acutely ill patients varied between 4.6 and 7.5 and for chronically ill patients between 1.5 and 2.0. Mr. Osborne placed little faith in the idea of setting a fixed ratio of beds to population. Two of the main provinces in Canada (Ontario and Quebec) receive many immigrants and therefore tend to be constantly short of beds, particularly since many of the immigrants come from areas of Europe where hospitals have a high utilization rate. It is also paradoxical that in some provinces with a low bed capacity there is also a low utilization rate, even in spite of long stay and insurance coverage. All this means that it is impossible to say, when a hospital insurance plan is started in a province, that the figure for hospital beds should be the same as in adjacent provinces with the same type of plan. Hospital planning in Canada should include planning for domiciliary care, otherwise patients who could be treated at home will stay in the hospital. Under the prospective provincial hospital plans, more adequate attention will probably be given to general planning, and provision of facilities for active, chronic, convalescent, rehabilitative, and other beds will probably be more balanced.

Chronic Diseases.—At the same meeting, speakers emphasized that it was time to stop trying to define chronic diseases narrowly and to imagine that physicians treat two separate entities—acute and chronic disease. Throughout the course of the chronic disease, some type of treatment can always be given. The difficult but essential problem to be overcome is the integration of treatment of chronic diseases with other aspects in the social and economic field. The services for chronic diseases are provided in a wide range of facilities, including the general hospital, special hospital, convalescent home, nursing home, rehabilitation center, physician's office, and the patient's home. Because it is necessary to insure that care is being provided at the correct level, the needs of each patient must be assessed and reassessed from time to time. A controversy still exists as to whether separate institutions are needed for chronic diseases or whether

these diseases should be treated in a general hospital. Canada will probably adopt a compromise according to the area, sometimes using the wing of a general hospital and sometimes separate facilities. It is also essential that there be a flow of patients between the various levels of care; this implies cooperation with other agencies. Hospital admission policy must be coordinated with a satisfactory discharge and domiciliary care policy.

Dr. Charron of Ottawa suggested classification of patients with chronic disease for admission as: those with a favorable rehabilitative prognosis, those with a poorer prognosis, those seeking alleviation by hospital care, and those in a terminal state. Another problem is that of determining whether the authority for admission should be placed with the patient's physician or with a screening committee acting in close consultation with the physician. The criterion for admission of a chronically ill patient is that active treatment be required. The discharge arrangements are the responsibility of social service workers and should be anticipated when the patient's admission is arranged. At present, the weakest link in the program in Canada is the social services, where a shortage of all classes of trained personnel exists. Any research program on chronic diseases should include research into planning and administration and into the prevention of disease.

Health Education.—At the same meeting, Dr. Gilbert said that health education is a basic function of all health departments. It should also be the main objective of all voluntary health agencies and the basis of all activities of health workers. The most efficient method of carrying it out is by personal contact, but in order to reach the whole population, mass media must be used even if such education is more superficial. The health educator should be specially trained to assist other members of the health team. Health educators might carry out locally a continuous health education program, but materials for this program might best be prepared and distributed at the national level. The present one-year course for health educators is probably inadequate, and the University of Toronto is considering a two-year course leading to a degree.

FRANCE

Antihyaluronidase Serum and Cancer.—At a meeting of the Academy of Sciences in March, A. Lacassagne and co-workers stated that they attributed the growth and invasiveness of mammary cancer in mice to the production of hyaluronidase. They tried to stop this proliferation with antihyaluronidase serum. The natural barrier of the connective tissue was thus strengthened. The authors propose to try this serum as a palliative treatment of some cancers in human beings.

Housewives' Eczema.—At the February meeting of the French Society of Allergy, Coulant and Lopes stated that water eczema is not a matter of simple allergy to water or to any household product but that such products localize the disorders on the hands and forearms. The cause is a parasitic infiltration. When the parasitosis is cured, the eczema disappears and housewives may go on with their housework even if the cutaneous test with the localizing products remains positive.

Cardiac Catheterization.—J. Facquet and co-workers at the International Cardiologic Week reported that catheterization of the left side of the heart can be accomplished without significant risk through a bronchus under bronchoscopic control. This method is not associated with any pleuropulmonary complication and is painless. A simple puncture of the auricle has been made in 200 patients. This makes it possible to make auricular tracings and to measure intra-auricular pressures. The procedure is chiefly useful in studying mitral valvular diseases, in patients in whom catheterization of the right side of the heart has failed. Another advantage of the method is that it can be repeated several times. The tracings must be interpreted with caution. Allison and Linden's coefficient, bringing into account the zero reading of the pressure at the moment when the mitral valve shuts and opens, is the best way to evaluate the pressure. The pressure in the left auricle and ventricle can be measured simultaneously.

Allergic Character of Peptic Ulcer.—Iagov and Cosmulesco (*Archives des maladies de l'appareil digestif et de la nutrition*, February, 1957) stated that in guinea pigs sensitized to human serum or an extract of corn starch, the antigen injected under the gastric serosa gave a congestive zone at the point of injection. Among 28 patients with peptic ulcers, only one did not respond to one or several tests. Of 85 such patients, 31 showed a gastric eosinophilia. It cannot be said whether allergy occurs before or after the ulcer is formed.

Hypogalactia.—Ruzicic (*Concours médical*, Feb. 23, 1957) proposes to use the baby's thirst to measure hypogalactia in the mother. The baby is placed at the breast, and after nursing he is given as much water as he wants. The quantity of water imbibed is measured, and the total quantity thus taken in 24 hours is calculated. The author believes that the quantity of water taken after nursing corresponds to the deficit of the mother's milk. If the amount of water drunk is less than a third of the optimal quantity of milk the child should get, the child is merely observed, but if the amount is more than half of the optimal quantity, artificial feeding should be started.

INDIA

Kwashiorkor.—Subrahmanyan and co-workers (*Indian J. Pediat.* 24:112, 1957) state that kwashiorkor is common among malnourished children of the lower income groups in India. It is caused primarily by a deficiency of protein in the diet, although vitamin deficiencies may be contributing factors. Investigations carried out in the Central Food Technological Research Institute at Mysore have shown that a low-cost protein food made from low-fat groundnut flour (60 parts), Bengal gram dhal (20 parts), and skim milk powder (20 parts) and fortified with calcium and vitamins is effective in the treatment of protein malnutrition. The authors reported three patients with

kwashiorkor treated with this low-cost protein food. The patients were children aged 2 to 3 years. Their diet survey revealed that the daily intake of calories and proteins was highly inadequate over a period of one or two years. There was no history of any previous illness. Generalized edema was present in all patients. All had had diarrhea for 15 to 30 days. Two showed mild angular stomatitis, and discoloration of the hair was present in two. One showed crazy-pavement dermatosis over the legs and forearms, and the other two showed hyperpigmentation with dermatitis over the thighs and hips. The serum protein and serum albumin levels were very low, but the serum globulin level was normal. Routine hospital treatment for diarrhea and edema given for two days was of no avail. Later the low-cost protein food was given in four divided doses in the form of gruel sweetened with 2 or 3 teaspoonfuls of sugar, the daily dose being 4 or 5 oz. (113.3 or 141.7 Gm.). One ounce (28 Gm.) of this food supplied 11.5 Gm. of protein, 210 mg. of calcium, 230 mg. of phosphorus, 0.4 mg. of thiamine, 1.0 mg. of riboflavin, 4.0 mg. of niacin, 857 I. U. of vitamin A, and 71 I. U. of vitamin D. A marked improvement in the general condition was noticed in 8 to 10 days, with complete disappearance of the edema taking three or four weeks. Diarrhea, dermatosis, and hyperpigmentation all disappeared in time. The patients were kept in the hospital for six to eight weeks. The average loss of weight due to disappearance of edema was 3 lb. (1.4 kg.), and the total gain at the time of discharge was about 8 lb. (3.6 kg.).

Struma Lymphomatosa.—Sathe and Sirsat (*Journal of Postgraduate Medicine*, April, 1957) reported 10 cases of thyroid glands removed surgically which on histological examination showed evidence of struma lymphomatosa. Six of the cases were diagnosed clinically as malignant goiter. The ages of the patients varied from 35 to 67 years; 7 were female and 3 male. The duration of the disease ranged from one week to two years. The patients complained of swelling in the region of the thyroid and symptoms of pressure on the trachea or esophagus. Pain was present in three patients. The enlargement was bilateral in all but one. None showed signs of thyrotoxicosis. Total thyroidectomy was performed on two and subtotal on eight patients. In one patient, in spite of operative removal of the thyroid, relief from pressure symptoms was not complete and a roentgenogram four months after operation revealed a mass in the retrotracheal region. In this patient there was postoperative growth and downward extension of the residual struma in the retrotracheal region.

Family Planning.—A family planning training center was established in Bombay for training physicians, health visitors, and social workers. Five grants for opening and maintenance of family planning clinics and two for research on family planning were made by the government. A detailed scheme for promoting family planning has been drawn up for the whole country. It consists of the opening of government-aided family planning clinics, especially in rural areas, carrying on of publicity for family planning through audiovisual aids, training of medical and auxiliary personnel in family planning, laying down the standards for contraceptives, and undertaking of demographic, medical, and biological research studied.

NORWAY

Infectiousness of Tuberculosis.—While it is generally assumed that the risk of infection with tuberculosis varies greatly under different conditions, statistical proof of this assumption has seldom been undertaken. In a 146-page monograph, Hertzberg and Backer of the Tuberculosis Division of the Oslo public health service have attempted this task. They studied some of the 11,179 persons registered as new cases of tuberculosis in Oslo during the 14-year period, 1940 to 1953. In the homes of 2,361 of these persons there were 4,257 children under the age of 15 years. Each of these homes was visited, all occupants undergoing tuberculin testing and a radiological examination. These home contacts were classified according as they were tuberculin-negative, tuberculin-positive, superinfected (Pirquet reaction increased), or actively tuberculous. The patients on whose account the homes were visited were classified in different groups according to the severity of the disease, with cavitation at one extreme and pure hilar adenitis at the other. Account was also taken of whether tubercle bacilli were demonstrable by direct microscopy or culture. Concomitant cough and sputum were also factors influencing the risk of infection. The authors concluded that for children aged 0 to 4 years the risk of infection is three times greater when the patient suffers from cavernous tuberculosis than when he presents pulmonary infiltrations without radiological signs of necrosis. It is hoped that these statistical facts may in some degree assist the phthisiologist.

Herniation of Nucleus Pulposus.—Berg and Kolstad, in *Tidsskrift for den norske lægeforening* for June 15, report a series of 135 patients with herniation of the nucleus pulposus. Of these patients 100 were operated on. A follow-up examination one to nine years after treatment showed that, in the operated group, 77 had achieved a complete cure with full capacity for work, 16 were improved, and 6 obtained poor results. Though in the patients receiving only conservative treatment the condition was less severe, 11.5% obtained poor results, 60% were cured, and 28.5% showed some improvement. Myelography was found to be essential to the diagnosis of herniation of the nucleus pulposus. Fixation operations are now limited to a partial laminectomy or an archotomy of the adjoining arches. The operation was followed in one patient by complete paralysis of both legs. Slow but almost complete recovery was effected after conservative treatment.

Symposium on Anticoagulants.—Prof. P. Owren (*Nordisk medicin*, May 30, 1957) said that the risk of hemorrhage from anticoagulants was about the same for bishydroxycoumarin and phenindione, being very small in either case, with only about 2% of the patients suffering from this complication. He deplored

the lack of control groups as a check on the results claimed, but he insisted that ethical and legal considerations prevented administration of placebos to patients who believe they are receiving bona fide treatment. Dr. T. Hilden argued on the other hand in favor of control series to provide reliable evidence for or against long-term treatment with anticoagulants. With an experience of more than 600 patients given long-term treatment, Owren said that the mortality was between 4 and 6% in the first year, but only 2.5% when the symptoms had lasted less than a year. Dr. C. Bjerkelund gave an account of the 237 patients surviving myocardial infarction who were treated with anticoagulants in the acute stage of the disease. While 119 had continued to receive anticoagulant treatment, 118 had not received it, but were kept under observation. The relapse rate of infarction was much higher in the latter than in the former group. The difference was most marked in the first year of the treatment in patients under the age of 60. Here the relapse rates were respectively 3 and 14%. The chance of dying of a new infarct was greater for young than for elderly patients. The latter were more liable to progressive cardiac insufficiency—a condition less amenable to anticoagulant treatment than infarction.

PORTUGAL

Epileptic Psychosis.—D. Furtado (*Jornal do Médico*, 1957, no 740, pp. 729-740) says that epileptic psychoses assume variable forms—confusional states, psychosomatic types, endogenous types, cyclothymia, and schizophrenia. The author even found recurring paranoid episodes with hallucinations in patients with epileptic psychosis. From the electroencephalographic viewpoint, interseizure psychosis appeared more frequently in patients with temporal lobe epilepsy, in whom the symptoms are psychomotor or purely psychic. Also in centrencephalic epilepsy, with bilateral paroxysmal dysrhythmia, interseizure psychosis may be seen. This does not occur in patients with focal epilepsy. A strange feature of this condition is the normalization of the epileptic dysrhythmic electroencephalogram during the period of the interseizure psychosis.

Herpes Zoster.—Bastos Viegas and Cunha Veigas (*Jornal do Médico*, 1957, no. 733, pp 327-330) obtained good results in 42 patients with herpes zoster by giving a daily dose of 20 to 60 mg. of emetine chloride. There were no side-effects. When fever or systemic symptoms accompanied the pain and vesicular eruption, antibiotics were also given. A prolonged anesthesia of the radicular zone was observed in some patients.

TURKEY

Turkish Medical Association Centennial.—The Turkish Medical Association was founded in 1856 at the termination of the Crimean war with the cooperation of French and English army surgeons. At all times during the past 100 years the changes in the political and social structure of the country have to a high degree been realized by virtue of the activities of physicians devoted to medical and social progress. Although a great deal has been accomplished, much remains to be done, especially in medical education. The steady increase in population necessitates more physicians, but more and more students are deciding on careers in the fast-growing industries. On the average 350 to 400 physicians are graduated annually. At present there are 8,172 physicians (7,518 men and 654 women) of whom 4,192 are specialists and 3,980 are general practitioners. Of the 8,172 physicians 2,260 or 1 for every 683 persons are located in Istanbul, 734 or 1 for every 1,581 persons in Ankara, and 427 or 1 for every 2,106 persons in Izmir. More physicians are needed. There are 759 vacancies for the position of staff physician in government hospitals, and 94 more health centers are needed. These would require 204 health officers, 234 center physicians, 49 anti-malarial specialists, 33 anti-trachoma specialists, 11 anti-venereal specialists, 21 phthisiologists, 104 pharmacists, 462 sanitary inspectors, and 315 nurses and midwives. In 1956, 195 physicians, 61 specialists, 109 nurses and midwives, and 51 interns resigned. Of 157 districts 28 are without a physician; 77 health centers have a full staff, 81 have only one physician, and 43 have none.

The association's report on the financial status of physicians reveals that 80% of the specialists have no bank account worth mentioning; 75% are not home owners or owners of real estate; 16% have a car which they drive themselves; and 1% employ a driver. Physicians fees are too low. Of the general practitioners 82% have no bank account or property. Attention was drawn to the discrepancies in general practitioners' fees and salaries accorded engineers, some of whom receive 10 times as much as the physician.

UNITED KINGDOM

Duodenal Ulcer in Children.—Although duodenal ulcers are known to occur in children, Goldberg (*Brit. M. J.* 1:1500, 1957) states that the incidence is much higher than is generally recognized. He reports a series of 20 cases and emphasizes that the clinical findings differ from those observed in adults. In the infant the condition is acute, with perforation and hemorrhage being common. In the older child the presenting symptom is pain in most cases. The location, character, time relation to meals, and relief by drinking milk suggest the diagnosis, but in about half the cases the pain is atypical. In children the onset is often acute with severe generalized pain or pain referred to the umbilicus, right hypochondrium, or right iliac fossa. Vomiting and pyrexia are often present. The clinical findings may resemble those of appendicitis or intestinal obstruction, and, in error, operations are frequently performed for the latter conditions. Hematemesis and perforation may occur.

During the second phase the history is still atypical, but the symptoms are less acute. The abdominal pain is often generalized, central in position, or in the right hypochondrium, and frequently it is not relieved by alkali, food, or vomiting. It is often worse at night and may last from a few minutes to several hours. Local

tenderness may be absent. All complications, except malignancy, are the same as in adults. Hematemesis is more common than melena. Pyloric stenosis occurs in about 25% of the patients and more frequently in older children. The fractional test meal is of little help in diagnosis, as it usually shows normal results. Even at laparotomy an ulcer can be overlooked, as there is little fibrosis and the outer coat of the duodenum usually appears to be normal. The only aid that establishes the diagnosis beyond doubt is a barium meal, although the radiologic demonstration of the niche of a duodenal ulcer in children is difficult because of the rapidity with which the barium passes the duodenal cap. With the exception of closure of perforations, the treatment of a duodenal ulcer in childhood and adolescence is medical. Stress is an important causative factor.

Medical Research Council's Annual Report.—According to the report of the Medical Research Council for the year 1955-1956, carcinogens found in tobacco smoke have induced hyperplasia in human fetal lung grown in tissue-culture. Poliomyelitis vaccination with the British vaccine has shown that the titers produced against all three types of virus are satisfactory, and experiments with monkeys show that it confers a high degree of immunity to challenge with a virulent strain. In children aged 1½ to 9½ years, the attack rate of paralytic poliomyelitis, after vaccination, in 1956-1957, was only 20% of that in unvaccinated children. Live attenuated vaccines are under trial.

It was shown that a bacterial virus acts by attaching itself to the bacterial cell and injecting its desoxyribonucleic acid, which takes control of its host's synthesizing mechanisms, causing them to produce more viral desoxyribonucleic acid and protein. Often bacteria become permanently infected with a phage virus and are able to transmit it to their progeny. In work on experimental filariasis, it was shown that microfilariae remained in the lung capillaries during the day and were more generally distributed in the circulating blood at night. The antifilarial agent, diethylcarbamazine citrate, acts like an opsonin and is active in the blood stream where the phagocytes are inaccessible. Species of Wuchereria similiar to the human type have been found in animals, and several species of mosquito are known to be vectors. Control, by use of DDT, of the Simulium fly that is the vector of onchocerciasis has been successful. The difference between normal and sickle-cell hemoglobins has been shown to be due to one peptide which bears a positive charge in sickle-cell hemoglobin with a pH of 6.4 but is uncharged in normal hemoglobin. This difference is due to a valine molecule in the charged peptide and a glutamic acid molecule in the neutral peptide. This is the first time that the effects of a single mutation on the chemical structure of a protein have been elucidated. It is thought that when the sickle-cell-hemoglobin molecules lose oxygen, they may form fibrillar aggregates which attract one another into a parallel orientation, distorting the cell.

Homografts are destroyed unless the graft is between identical twins or members of an inbred strain. The power to destroy grafts is lost after irradiation. Irradiated mice, normally expected to die, recover when inoculated with marrow which colonizes the irradiated host. Under these conditions grafts from other species may survive. Leukemic mice have been treated by irradiation to destroy all the blood forming tissue and then have been given a marrow graft from a healthy animal.

Obstetrics and the General Practitioner.—Although the number of confinements in the hospital is increasing, many women prefer to have their babies at home under the care of the family practitioner or in a local hospital where he has access to beds. The National Health Service has done little to encourage domiciliary midwifery, apart from paying the physician a little extra for his services. The College of General Practitioners has published a survey of general-practitioner obstetric services, based on 4,277 deliveries conducted by 117 family physicians in the southwest part of England. About half these physicians had received postgraduate hospital training in obstetrics, and 90% had been practicing domiciliary obstetrics for more than five years. According to the report, the standards are excellent, but this is based on the work of a selected and well-qualified group and does not necessarily reflect the obstetric standards of general practitioners throughout the country. Each physician selected for this review averaged 30 obstetric cases a year, about a third being delivered in general-practitioner hospitals and the remainder at home. Most of the physicians had diagnostic laboratory and radiologic facilities, and about 67% had access to beds in local hospitals—which is unusual under the National Health Service. This does not reflect the facilities generally available to general practitioners for obstetric work. The survey is therefore biased in favor of good obstetric care.

According to the survey, the perinatal mortality for deliveries in this general-practitioner service is 23.5 per 1,000 total births, a figure that should be reduced by more careful selection of cases. Hypertension, prematurity, breech presentation, multiple pregnancies, and multiparity increased the perinatal mortality and, in the opinion of the writers, require hospitalization with specialist care. Just under 20% of the deliveries were in this class. The report emphasizes that there is greater scope for the use of local analgesia and the prophylactic use of ergonovine maleate in domiciliary obstetrics. It also points out that it is a pity that the National Health Service does not do more to promote a full general-practitioner maternity service. Unfortunately, owing to other commitments, the general practitioner cannot always be present at a confinement when called. The survey shows that he attended 63% and was present at the actual delivery in only 48%; the local midwife or hospital physician delivered the remainder. This is no reflection on the general practitioner but on his lack of facilities for good obstetric work. The Royal College of Obstetricians and Gynecologists recognizes this and suggests that a way be found for him to devote sufficient time to maternity cases. This might be attained by diminishing the number of other patients on his list and by making a commensurate increase in his fee for obstetric services.

CORRESPONDENCE

HYPOGLYCEMIC VERSUS ANTIDIABETIC

To the Editor:—The notes of caution in the editorial in the June 1, 1957, issue of THE JOURNAL on the use of tolbutamide (Orinase) in the treatment of the diabetic are commendable. I feel, however, that there are certain aspects of the subject which should receive more consideration.

It seems to me that the problem of seeking oral substitutes for insulin has pointed up the important question of what it is we aim to accomplish in treating the diabetic. The philosophical concepts which arose from the contributions of the early investigators in the field such as Rubner, Voit, Lusk, and Dubois would appear to indicate that this common and remarkable disease is primarily the result of a defect in the utilization of the dextrose molecule by the human organism. What should, therefore, be the aim in therapy but to seek those measures which would correct this metabolic derangement and recreate the conditions necessary for increasing the consumption of dextrose by the body. Certainly the discovery of insulin proved to be that boon to the diabetic in that it became possible for the diabetic to utilize amounts of glucose equal to normal amounts. Surely the return of the blood sugar to limits close to the normal range served as a secondary accomplishment of the increased capacity for glucose utilization made possible by the use of insulin. As a matter of fact, many physicians are sufficiently convinced that recreating an approximately normal capacity to utilize glucose is the basis for ideal therapy regardless of how the blood sugar is affected. What most of us seem to forget is that the aim in therapy is not primarily to depress the blood sugar but to seek to re-establish a normal physiological state for carbohydrate utilization. It seems to me that the whole idea of seeking an orally given agent with hypoglycemic properties is based upon a false concept, for one must realize that agents with this property need not necessarily have a salutary effect upon the derangement in carbohydrate metabolism which is so pronouncedly a *sine qua non* of diabetes mellitus.

Some of us have lived through the era of synthalin and recognized its hypoglycemic properties to arise from specific organic damage to the liver. It is well known that hepatectomy in the animal results in the quick onset of hypoglycemic convulsions, that ligating the hepatic artery frequently does the same thing. that phosphorus and chloroform poisoning produce hypoglycemia, and that hepatitis and cirrhosis of the liver with cholemia are accompanied by hypoglycemia. It seems to me that thus far the investigational studies with tolbutamide indicate that it is probably an hepatotoxic substance and interferes with the activity of glycogenolytic enzymes, thus producing its hypoglycemic properties. Even if some of its activity is related to interfering with "insulinase," it still remains a liver poison. I fear that the recent excitement about orally given hypoglycemic agents will ultimately meet the same fate as synthalin.

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CARBON TETRACHLORIDE SUBSTITUTES

To the Editor:—Dr. John H. Schafer, in the Correspondence section (*J. A. M. A.* 163:1179 [March 30] 1957), rightly raised the question "what substitutes" to the statement attributed to the New York City Poison Control Director, Harry Rabin, in an editorialized article in which he was quoted as saying that carbon tetrachloride is "so vicious that it should be banned from every home." There is no disagreement with Rabin's statement. Fortunately, there are a number of commercial substitutes for carbon tetrachloride that are likewise noninflammable and in addition are considerably less toxic and hazardous for the home user. The chief components of these substitute formulations are methyl chloroform, trichloroethylene, and perchloroethylene. Although they are noninflammable and present far less risk of injury to the adult user, whose chief exposure is by inhalation, they should by all means possible be kept out of the reach of children; they cannot be taken internally without the possibility of serious effects. Moreover, the substitute formulations commonly contain inhibitors of various sorts, which in turn possess varying degrees of toxicity. Taken orally, methyl chloroform is reported to be somewhat more injurious than carbon tetrachloride; trichloroethylene and perchloroethylene are, however, considerably less poisonous by mouth than is carbon tetrachloride. For the home user the price differential between carbon tetrachloride and its substitutes is insignificant. These chlorinated hydrocarbons are recommended as replacement for carbon tetrachloride for spot-removing around the home. But their careless use in unventilated spaces or in association with alcoholic intake before, during, or after use may still subject the user to possible injury.

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MISCELLANY

AMERICAN MEDICINE ABROAD—PUSAN, KOREA

Lou Hazam

This is the first of a series of on-the-scene reports from the "March of Medicine" production team, which is traveling around the world to film an hour-long television program on the work of American doctors abroad—the services they perform, the conditions they face, the personal satisfaction they receive in their unofficial roles as America's medical diplomats. The author, Mr. Lou Hazam, has written all but one of the "March of Medicine" scripts since the series started in 1952. In this article, he tells of the dedicated work of the Maryknoll Sisters in Pusan, Korea. Also on the "March of Medicine" itinerary are such places as Hong Kong, Sarawak, Burma, Nepal, India, Ethiopia, Lebanon, Turkey, and Guatemala. The program, sponsored and produced by Smith, Kline & French Laboratories in cooperation with the American Medical Association, will be seen in color next spring over the NBC television network.—ED.

High on a hill overlooking the sprawling, bursting-at-the-seams city of Pusan, Korea—swelled by thousands of refugees from the Communist north—four American doctors, who wear a special and distinctive habit, examine and treat the sick who line up outside their door by the hundreds, often as early as midnight. They are the Maryknoll Sisters of St. Dominic.

"They just bed down and wait for us," said Sister Angelica, the Superior, and a nurse by training, showing me the long line that stretched out of sight down a cobblestoned alley to the street. "I've gradually persuaded them not to start a line at 2 a. m., but as it is, they're there when we get up—there before dawn."

I looked down the line, and as far as the eye could see were the sick, the halt, the lame, the blind; little wrinkled old women sprawled on faded, tattered pieces of canvas. . . . infants wrapped on their mothers' backs. . . . balloon-trousered men, their families clustered close around them. . . . dark-haired children, wearing nothing much from the waist down. . . . scores squatting in pain, rocking back and forth as they waited.

"They come from as far away as Seoul," I heard the Sister's voice go on. "But by far, most of our patients come from the homes, the huts, the shanties, and tents around Pusan. And since some have no homes, they come to us right off the streets. Sometimes they come on foot, and many times you see them being carried in on the back of some member of their family."

She told me that often they come too late, after precious weeks of trying to treat the sickness themselves—perhaps by burning the skin over the afflicted area with a hot punk.

"You know the idea. If you can create a pain worse than the one that hurts you, you somehow make the first pain better. Or the old pagan idea—fire cleanses everything."

The history of the Maryknolls in Korea goes back to 1924, when the order was first established in the north. There they remained until World War II started. Korea was, of course, Japanese dominated at the time, and the Sisters were sent back to the States on the Gripsholm with the first exchange of prisoners. They returned in 1949 to Pusan, only to be caught by the Communist invasion from North Korea. This time they were evacuated to Japan, where they remained until April, 1951. Finally, with General MacArthur's express permission, they were allowed to return—the first civilian medical team to go back to Korea. The armed forces gave them a former Japanese estate totaling some four acres, all walled or fenced in. When I found them, they were working along just as if nothing had happened to interrupt them.

"We open the gate at 8:30 in the morning," continued Sister Angelica. "We send out one of our nurses first, to go along the line and seek out the critically ill. We try to take care of them ahead of the others."

I watched the gates open and the nurse emerge and proceed up the line. I saw the patients gather about her . . . listened to families recite the history of their troubles in Korean, which I was sorry I could not understand. Once, satisfied, I saw her motion a woman, propped against the fence, inside. Quickly her husband bent down, pulled her somehow on his back and then trotted his burden through the gates—two doll-like figures whom I was told had walked miles to reach here the night before.

What kind of cases do these Sisters see? They showed me a chart:

Diagnosis	*Frequency*
Cardiac	5–10% of all patients
Cirrhosis of the liver	4% of all patients
Diabetes	2% of all patients
Hypertension	5% of all patients
Malnutrition	90% of all patients
Tuberculosis	1,700 average per month

Yes, mostly tuberculosis—whatever else may bring them in—and malnutrition underlying almost all illness.

The Sister doctors examine and treat patients in the clinic from morning until about 5:30 in the afternoon, assisted by a few Korean doctors and nurses on the staff, and augmented by Sisters trained as pharmacists and laboratory technicians. The doctors, considering the unending stream of patients day after day, appeared remarkably cheerful. Sister Agnus Therese and Sister Lois had both graduated from Marquette University Medical School and interned at St. Vincent's Hospital in New York. Sister Gilmary secured her medical degree from the Women's Medical College, Philadelphia, and studied pediatrics at Duke University Hospital. Sister Maria Fidelis had also attended Marquette and had gone on to further work in Cincinnati. They are assisted by 9 or 10 registered nurses, all from the States.

Sometimes there have been more than a thousand patients waiting in line to see them. The record over the years:

Year	No. of Patients
1951	180,697
1952	410,529
1954	488,991
1955	381,742

The operation is strictly an outpatient clinic operation. While they are presently building a hospital, they have no beds available. Patients are treated, go home and return when necessary, lining up at one side of the gate as returning patients. As pointed out, a high percentage is afflicted with tuberculosis—pulmonary the highest—tuberculosis of the bone, and also meningitis, especially in children, and many with peritonitis.

Second on their list were intestinal infections of various kinds, particularly those that produce the typhoids. Korea is called a "parasitologist's paradise" because of the number and variety of parasites found in that country. For example, roundworm, hookworm, ameba, lung and liver flukes, and Trichuris. As one medical observer put it, "multiple parasitic infections occur frequently, the coexistence of two being more common than a single infection." Ninety-five per cent of the Koreans are believed to have parasitic infection.

According to those who have studied the problem, the main source of ill health has been established as (1) poor sanitation, (2) the eating of raw fish, and (3) the traditional use of night soil as fertilizer—all this plus the impact of war, bringing with it food shortages and inadequate housing.

Sister Gilmary is in charge of the clinic's tuberculosis program and leaves the clinic grounds every afternoon to go on a home visit.

"This new program of ours grew out of the conviction that we were doing more harm than good treating recognized adult tuberculosis patients here at the clinic, where those with positive sputums could be a menace to other patients. Also, we knew that in order to be treated properly, they should be resting, and not have to walk to the clinic. So we restricted our tuberculosis program to those who reside in our own area, where we could readily reach them, and put them to bed at home. A nurse sees each patient every week, and I try to see each one at least once a month. We never make these visits at any specified time," she declared, "since we want to see if the patient is really cooperating."

The "March of Medicine" will include such a visit in its film report of the Maryknoll Clinic.

As I was leaving, a little boy about 5—just back from school—ran up and hugged Sister Angelica's skirts.

"And who's this?" I asked.

"Oh, this is our Ashcan baby, Bundo. That's Korean for Benedict."

"Ashcan baby?"

"Yes. He was dropped in an ashcan at our gate when he was just a year and a half old. . . . that's a guess—the age, I mean. We found him and brought him in and warmed him by the fire. He was just skin and bones. After a time we found a Korean family on the grounds to look after him. We support him, of course—providing the clothing he needs and food, and pay the family for caring for him."

She smiled apologetically as she held him close to her.

"Just a little extracurricular activity," she said.

I looked at the fat, healthy, laughing little Bundo, and around me at the busy sisters, serving so far from home in the best tradition of medicine, bade them good-bye and turned my face toward Hong Kong—next stop on the "March of Medicine's" agenda—wondering what I'd done with *my* life.

LAW DEPARTMENT

MEDICOLEGAL ABSTRACTS

Statute of Limitations: Concealment of Cause of Action.—This was an action for damage for injuries allegedly caused by the malpractice of the defendant physician. The jury returned a verdict in favor of the plaintiff and the trial court sustained the defendant's motion to set aside the verdict and grant the defendant a new trial. From this action of the trial court, the plaintiff appealed to the Supreme Court of Appeals of West Virginia.

The defendant removed the plaintiff's gallbladder on June 16, 1947. During the time she was in the hospital following the operation, and in the course of office calls after she was discharged from the hospital, the plaintiff complained to the defendant of pains in her abdomen. The defendant assured her, however, that she could not expect to recover immediately from an operation such as she had had and that she would be all right. From August, 1947, to October, 1953, the plaintiff consulted a number of physicians for various ailments. She complained to them of pain in her abdomen; they gave her answers similar to that of the defendant. Finally in October, 1953, the physician who was then treating the plaintiff had x-rays taken and they disclosed a hemostat in the plaintiff's abdomen. Suit was filed in 1954.

The defendant contended that the plaintiff's action was barred by the one-year statute of limitations with respect to malpractice. Section 55-2-17 of the West Virginia code provides that the statute of limitations will be tolled if the person, against whom the right of action has accrued, obstructs the prosecution of such right by any indirect ways or means. In order for this provision to apply, said the supreme court, there must be an affirmative act designed to conceal the existence of liability, and to operate in some way upon the plaintiff so as to prevent or delay suit; mere silence is not sufficient. The evidence showed that the defendant physician had no knowledge of the presence of the hemostat in the plaintiff's abdomen until after the taking of the x-rays in 1953. Since the cause of action against the defendant accrued at the time of the gallbladder operation and there was no actual knowledge, fraud, or concealment on the part of the defendant which would toll the statute of limitations, the supreme court concluded that the judgment of the lower court in favor of the defendant physician should be affirmed. *Gray v. Wright, 96 S. E. (2d) 671 (W. Va., 1957).*

MEDICAL LITERATURE ABSTRACTS

INTERNAL MEDICINE

Sporadic or Non-endemic Familial Cretinism with Goiter. J. B. Stanbury and E. M. McGirr. Am. J. Med. 22:712-723 (May) 1957 [New York].

The authors describe 3 types of familial nonendemic cretinism with goiter resulting from primary failure at any of the essential steps in the synthesis of the thyroid hormone. In the first type, which occurred in a 16-year-old girl, the defect was a failure to utilize trapped iodide. The patient was 1 of 7 siblings, 4 of whom, including the patient, were cretins with goiter. She was dwarfed, grossly retarded mentally, and had a large nodular goiter, over which a bruit and a thrill were present. The concentration of the protein-bound iodine in the serum was 1 mcg. per 100 cc. When radioactive iodine (I^{131}) was given orally, a large fraction of it accumulated with remarkable rapidity in the thyroid. Maximal values were observed in the gland within 2 hours. When the accumulation had reached a plateau the patient was given a dose of 2 Gm. of potassium thiocyanate. Immediately there was a striking and rapid disappearance of the I^{131} from the gland. Thyroidectomy was performed, and only minute amounts of iodine were detected chemically in the thyroid. Similar observations were made in 2 goitrous and cretinous brothers of the patient. The metabolism of iodine appeared to be identical with that in patients receiving full doses of the antithyroid drugs of the thiocarbamide group. Since these drugs exert their antithyroid effect by inhibiting the transfer of iodide to tyrosyl residues through an enzymatically controlled oxidative step, it seems reasonable to suppose that the capacity to perform the oxidative step was lacking in these patients. While the thyroid was able to concentrate trapped iodide from the serum it could not produce iodotyrosines from tyrosyl residues and iodide, presumably because of lack of an oxidative enzyme.

In the second type, present in a 25-year-old woman who was physically stunted with disproportionately short extremities, mentally backward, and with a multinodular goiter, the rate of disappearance of stable iodine from the thyroid was calculated from measurements of the rate of disappearance of I^{131} from the gland and the urinary content of I^{131} and stable iodine before and during the administration of 1-methyl-2-mercaptoimidazole (Methimazole), a drug which blocks the incorporation of iodide into organic compounds. The rate of disappearance of iodine proved to be greater than could have been possible if the secretion product had been exclusively triiodothyronine or thyroxine, else the patient would have been thyrotoxic. Also, when the amount of "hormone" leaving the gland was calculated from mean values for urinary excretion of stable iodine and uptake of I^{131}, it was found that more than 1 mg. of iodine (5 times the normal value) was secreted daily. Chromatographic study of the serum disclosed normal amounts of triiodothyronine and thyroxine in the blood, but 4 days after a large dose of I^{131} only a trace of thyroxine could be identified in the thyroid. Iodine in the gland was almost entirely present as monoiodotyrosine and diiodotyrosine. These observations suggest that in this second type the thyroid gland cannot couple iodotyrosines into iodothyronines with sufficient speed to secure an adequate supply of hormone. The presumption is that this defect is due to failure of enzymatic coupling, but proof is lacking.

The third type of sporadic familial cretinism occurred in a 27-year-old man with multinodular goiter. Calculation of the rate of disappearance of I^{131} from the thyroid, chromatographic analyses of the patient's serum at various times after administration of I^{131}, analysis of the thyroid after thyroidectomy, and a detailed chromatographic study of urine specimens suggested that the cretinism resulted from failure of iodotyrosines to deiodinate. The hormone precursors monoiodotyrosine and diiodotyrosine escape from the thyroid gland into the blood and then into the urine because of lack of the enzyme, deshalogenase. The result is a leak of iodotyrosines of sufficient magnitude to cause serious iodine deficiency. Other biochemical abnormalities which have not yet been fully elucidated have been described by other workers. Genetic studies support the concept of the hereditary transmission of some type of sporadic cretinism with goiter. The condition shows a high familial incidence, and consanguineous matings are strikingly frequent among the parents of cretins. The combined results of biochemical and genetic studies made in Scottish and in additional similar Dutch cases suggest that a single recessive gene controls the presence or absence of a single deiodinating enzyme.

To What Extent Is Asthma an Allergic Response to House Dust? R. Genevrier, L. Michelet and M. Claude. Semaine hôp. Paris 33:1546-1549 (April 20) 1957 (In French) [Paris].

Skin tests were made in 244 patients referred to the authors in 1955 for investigation of supposed respiratory allergy. These patients, excluding 29 who had hay fever, fell into 3 groups: (1) 14 with spasmodic coryza; (2) 23 with spasmodic cough and bronchial syndromes;

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and (3) 178 with asthma, with which this study is primarily concerned. Positive skin reactions were obtained in 4 (28%) of the first group, 1 (4%) of the second group, and 113 (63%) of the third group. Sensitivity to house dust was present in 108 of the patients with asthma; to feathers in 80; and to cotton in 25. Sensitivity to other allergens was much more rare, the commonest, to wool, being found in only 8 patients. Many of the patients had a threefold sensitivity to house dust, feathers, and cotton. The discovery of 67% of positive skin reactions in 178 patients with asthma is significant in itself, but it becomes more so when the findings are considered in relation to the age of the patients. Sensitivities were present in 92% of those aged from 20 to 40 years. The fact that a lower percentage was found in the patients under 20 was probably due to a greater importance of food allergies in the young. Allergies of this kind were excluded from this study. The percentage of positive reactions declined substantially in patients over 40, the decline being the greater the older the patient and the more recent the asthma. Asthma in persons under 40 thus seems to be essentially the manifestation of an allergy and, except in young children in whom food allergies are undoubtedly important, this allergy is essentially respiratory in origin. Nonallergic factors, such as bronchial infection, endocrine disorders, neuropsychiatric manifestations, and metabolic disturbances, on the other hand, play a larger part in the dyspneic symptoms of older asthmatic patients.

The allergenic importance of house dust has long been recognized, but the exact nature of the specific antigen it contains is not known. Clinical observations have shown that many patients with asthma who are sensitive to house dust have no sensitivity to any of its known constituents. Many attempts have been made to determine the chemical composition of the antigenic substance, but none has succeeded. Indications are, however, that it is composed of a nitrogenous substance with large molecules, associated with hydrocarbons. The excellent results obtained in asthmatic patients by desensitizing them to house dust provide further proof of the part played by house dust sensitivity in the production of asthma.

Newborn Pneumonitis Virus (Type Sendai): Evidence of Infection in South-West Scotland. R. G. Sommerville. Brit. M. J. 1:1145-1148 (May 18) 1957 [London].

Complement-fixation tests were performed on paired serums obtained from 175 adults with pneumonia, 97 infants with pneumonia, and 172 patients with influenza in south-west Scotland. Newborn pneumonitis virus (type Sendai), which was isolated first from the lungs of newborn infants who died during an outbreak of pneumonitis in Japan, was used as antigen. For comparison, hemagglutination-inhibition tests for antibody reacting with newborn pneumonitis virus were performed on 381 of these paired serums obtained from 162 adults with pneumonia, 58 infants with pneumonia, and 161 patients with influenza. Evidence was found in adults for the existence of an agent which is capable of producing this antibody. A fourfold rising titer was detected by complement-fixation tests in the serums of 9 patients, and clinical details recorded from these patients revealed that the infection presented as pneumonia in 3 and as mild influenza-like illness in 6.

Pleuropulmonary Symptoms of Acute Leukemia. E. S. Mazzei and G. Masnatta. Prensa méd. argent. 44:1-5 (Jan. 4) 1957 (In Spanish) [Buenos Aires].

The authors observed 4 patients with acute leukemia. Review of the literature showed that the initial respiratory symptoms of acute leukemia are apparently infrequent. On the basis of their observations and of 12 reports, which analyze the respiratory manifestations of acute leukemia, the authors arrive at the following conclusions. The frequency of the anatomic lesions is greater than the clinical and radiologic findings. This became evident on the miscroscopic studies of the anatomic lesions. Pathogenetically, respiratory symptoms are caused either by infiltration of the parenchyma, which begins in the alveolar septum; by bronchial or bronchiole compression; or by subpleural infiltration. There is a continguous infiltration into the blood vessels, which causes pulmonary infarction. According to clinical and radiologic findings, symptoms may start with respiratory manifestations similar to those caused by other pulmonary diseases (such as tuberculosis, neoplasm, acute inflammatory pneumopathy, pleurisy). The complete hematological examination can establish the cause.

Inflation of Esophageal Hernial Sac in the Course of Induced Pneumoperitoneum. J. M. Workman. Am. Rev. Tuberc. 75:823-827 (May) 1957 [New York].

The author reports the occurrence of esophageal hiatal hernia detected by roentgenographic studies as a result of inflation of the hernial sac in the course of pneumoperitoneum which was induced in a 66-year-old woman with pulmonary tuberculosis. Detailed barium studies showed that the fundal portion of the stomach herniated through the esophageal hiatus. The esophagus was short and tortuous, with some dilatation. Air from the pneumoperitoneum extended above the diaphragm and in the hernial sac. This complication of pneumoperitoneum appears to be extremely rare; only one other case, in a 45-year-old patient with findings very similar to those described, has been reported. Formation of a redundant herniated peritoneal sac is one of the basic structural defects in sliding hiatal hernia. Since this form of diaphragmatic hernia is not at all uncommon, the rarity of this complication of pneumoperitoneum is surprising.

It may be that in most cases of sliding hiatal hernia the redundant peritoneal sac is considerably smaller than it was in this patient and in the case collected from the literature and for that reason might not be easily identifiable on roentgenographic or fluoroscopic examination. The muscular tone of the "collar" of the diaphragmatic hiatus may be adequate in young patients with hiatal hernia to prevent ingression of air into the sac. Both patients in whom induced pneumoperitoneum was complicated by esophageal hiatal hernia were in the older age groups. Pneumoperitoneum is less often given to patients over 40 years of

age because it is less often effective. The appearance of this complication is an indication for discontinuing the pneumoperitoneum.

Evidence of Psychosocial Factors in the Development of Pulmonary Tuberculosis. N. G. Hawkins, R. Davies and T. H. Holmes. Am. Rev. Tuberc. 75:768-780 (May) 1957 [New York].

In an attempt to test the hypothesis that a life-organizational stress situation of significant proportion appears typically shortly before the onset of pulmonary tuberculosis, a group of 20 sanitorium employees, 17 male and 3 female, who became ill with tuberculosis, was compared with an individually matched group of 20 employees who remained well. Each of the groups contained 1 physician, 4 registered nurses, and 12 subordinate nursing and auxiliary personnel. The matching included age, race, sex, marital status, education, time of employment, job classification, income, skin test reading, appearance of roentgenograms of the chest, and previous record of certain chronic conditions. Those who became ill had experienced a concentration of difficulties such as domestic strife, residential and occupational changes, and personal crises in the course of the 2 years preceding the change in a series of roentgenograms of the chest taken at 3-month intervals and leading to determination of pulmonary tuberculosis. This concentration of difficulties, or situational crisis, was significant in comparison with the experience of the group of employees who were well. The tuberculous group also evidenced a significant degree of psychoneurotic pathology and did not recognize or could not admit their personality deficit on questions in which this recognition was obvious.

The conclusion appears reasonable that many of the employees who became ill did so in a situation of stress which would be conducive to a lowered resistance. It is not suggested that stress must invariably accompany infection in order to produce progressive tuberculosis in man or that stress, if present, must be psychic in nature. Within the acknowledged limitations of the test, however, the postulation of psychosocial crisis as one of the precipitant causes is tenable.

The Effect of Butyl Sulfanilylurea on the Blood Lipids in Diabetes Mellitus. G. Corsini and L. Guacci. Minerva med. 48:1119-1124 (April 4) 1957 (In Italian) [Turin, Italy].

Twenty-two diabetic patients, 14 female and 8 male, 21 to 78 years of age, were treated with butyl sulfanilylurea for a period of 22 days. A dose of 2.5 to 3 Gm. per day was administered for the first 2 or 3 days. The dose was reduced to 2 Gm. per day for the following 8 to 10 days and to 1 Gm. per day for the remaining 10 to 12 days. Ten patients had a mild form of diabetes, 8 a moderate form, and 4 (3 of whom were under 35 years of age) a severe form. The patients were divided in 3 groups of 10, 7, and 5 patients respectively. Insulin therapy was discontinued for at least one week in the patients of the first and second group and was continued but with smaller doses in patients of the third group. The glycemia became normal and glycosuria disappeared after administration of the drug in the 10 patients of the first group, 7 with mild diabetes and 3 with moderate diabetes. The drug reduced but did not bring to normal the glycemia and glycosuria in the 7 patients of the second group, of which 3 had mild diabetes, 3 moderate diabetes, and 1 severe diabetes. The drug had no effect on the 5 patients of the 3rd group, which consisted of 2 patients with moderate diabetes and 3 with severe diabetes. The value of total lipemia of the patients of the first group was reduced from an average of 741 mg. per 100 cc. before treatment to 610 mg. (16 mg. per 100 cc. more than normal) after treatment, glycerides from 178 to 124 mg. per 100 cc. (38 mg. per 100 cc. more than normal), phosphatides from 261 to 225 mg. per 100 cc. (12 mg. per 100 cc. more than normal), and steroids from 264 to 223 mg. per 100 cc. (39 mg. per 100 cc. more than normal). The value of total lipemia of the patients of the second group was reduced from an average of 778 mg. per 100 cc. before treatment to an average of 681 mg. after treatment (29 mg. per 100 cc. more than normal), glycerides from 216 to 161 mg. per 100 cc. (79 mg. per 100 cc. more than normal), phosphatides from 253 to 229 mg. per 100 cc. (14 mg. per 100 cc. more than normal), and steroids from 263 to 243 mg. per 100 cc. (51 mg. per 100 cc. more than normal). The value of the total lipemia of the patients of the third group increased from an average of 739 mg. per 100 cc. before treatment to an average of 825 mg. (56 mg. per 100 cc. more than normal) after treatment, glycerides from 175 to 228 mg. per 100 cc. (163 mg. per 100 cc. more than normal), and phosphatides from 280 to 313 mg. per 100 cc. The concentration of steroids was not affected by the treatment.

SURGERY

Mitral Commissurotomy and Late Postoperative Rheumatic Manifestations. A. Actis-Dato and S. Olivero. Minerva med. 48:1411-1416 (April 21) 1957 [Turin, Italy].

The frequency of immediate and late postoperative complications due to a recurrence of rheumatic manifestations was studied in 200 patients, 49 male and 151 female, who had been subjected to mitral commissurotomy. The patients were 20 to 51 years of age, most of them between 20 and 25. They were followed up for a period of 2 to 5 years. Rheumatic or rheumatic-like manifestations were not observed in 43 patients before the operation. Seventy-two of 91 patients with typical rheumatic infection were under 25 years of age. Pleural adhesions were found in 15 patients during the operation: 7 of these patients had presented rheumatic manifestations before the operation. Adhesive or constrictive pericarditis was found in 4 patients. Some accumulation of fluid in the pleura was found in 8 patients. Aschoff's nodes were present in 8 of a group of 30 patients in whom a histological study of the auricles was made. Twenty-two patients had rheumatic relapses within 50 days after the operation. Relapses occurred in some a few months after the operation. Fourteen of the 22 patients had articular rheumatism shortly before the operation, and 4 presented frequent tonsillitis. Rheumatic manifestations

had not been observed before the operation in 2 patients. Late rheumatic relapses were observed in 57 patients, only 47 of whom presented rheumatic infection before the operation. The authors think that there is a close relationship between the existence of rheumatic infection before the operation and the occurrence of postoperative rheumatic relapses. Relapses were most frequent among patients 20 to 25 years of age.

A Five to Ten Year Survey of Pulmonary Resection for Tuberculosis. R. F. Lane and W. E. Harrison. Canad. M. A. J. 76:845-846 (May 15) 1957 [Toronto, Canada].

The results of a survey 5 to 10 years after operation on the first 100 patients subjected to pulmonary resection for tuberculosis at the Willow Chest Center in Vancouver B. C. are reported. There were 18 surgical and postoperative deaths. Of the 82 survivors, 25 had undergone pneumonectomy and 57 lobectomy. The sputum was free from tubercle bacilli in 77 of the 82 patients. Sixty-eight of the survivors have full-time and 8 have part-time employment. Of the 43 women in the group, 14 have had 27 pregnancies with 20 live births, without any activation of the tuberculous process. There were 2 spontaneous abortions, and in 4 women abortion was induced.

Supraclavicular Exploratory Excision of Lymph Nodes of Superior Thoracic Aperture to Ascertain Operability of Bronchial Carcinoma. V. H. Denk and P. Wurnig. Thoraxchirurgie 4:504-508 (April) 1957 (In German) [Stuttgart, Germany].

The authors found that 41% of the patients subjected to thoracotomy because of bronchial carcinoma were inoperable, despite the use of all available clinical methods. Since palliative resection does not improve the life expectancy, they believe that operability should be ascertained before the operation. Reports of some observers indicated that metastatic involvement of the supraclavicular lymph nodes could be expected in 10% of the patients with clinically operable bronchial carcinoma. To verify this, the authors performed bilateral exploratory excision of the cervical lymph nodes of the superior thoracic aperture in 100 patients with clinically operable bronchial carcinoma, that is, in those who had no palpable enlargement of the supraclavicular lymph nodes. The 100 patients included 21 with squamous-cell carcinoma, 43 with polymorphic carcinoma, 18 with small-cell carcinoma, 1 with adenocarcinoma, 1 with endothelioma, and 16 with unidentified carcinoma, because operation of the clinically identified bronchial carcinoma was contraindicated by internistic factors.

Cancerous involvement of the supraclavicular lymph nodes was found in 5 of the 100 patients: in 1 with polymorphic carcinoma and with atelectasis of the upper lobe on the left side; in 1 with squamous-cell carcinoma with incomplete atelectasis of the upper lobe on the right side; and in 3 patients in whom enlargement of the hilar lymph nodes could be seen on the tomogram. Two of these last 3 patients had a small-cell carcinoma and the third an adenocarcinoma. The authors believe that bilateral exploratory excision of the cervical lymph nodes should be done in patients with centrally located bronchial carcinoma in whom the process is no longer limited to one segment. Exploratory excision should always be carried out in patients with carcinoma of the branch bronchus and of the stem bronchus in which enlarged hilar lymph nodes can be recognized, insofar as there are no other signs of inoperability. It is doubtful if exploratory excision is of much help in patients with carcinoma of the apical segment of the upper lobe, because in these patients inoperability is more often indicated by the tumor itself or by metastases in the upper mediastinum. In patients with peripherally located carcinoma, exploratory excision is indicated only if the roentgenogram shows enlarged hilar lymph nodes. However, bilateral exploratory excision of the supraclavicular cervical lymph nodes should always precede thoracotomy if the stage of development of the carcinoma cannot be definitely ascertained from the roentgenogram.

Bilateral Adrenalectomy for Advanced Carcinoma of the Breast. M. Katz and H. C. Saltzstein. Am. Surgeon 23:301-307 (March) 1957 [Baltimore].

Bilateral adrenalectomy and oophorectomy was performed on 389 patients with advanced cancer of the breast. Of these, 379 were collected from various sources in the literature and 10 of the authors' own patients were included. For 23 patients it was too early for evaluation. There were 29 (7.9%) post-operative deaths; 159 (43.4%) were unaffected by adrenalectomy; and 178 (48.7%) showed moderate to marked improvement. Death occurred within 30 days after operation. Subjective improvement was remarkable in patients with bone lesions and local recurrences. They responded better to adrenalectomy than patients with visceral metastases; bone pain showed a dramatic disappearance as early as 24 hours after the operation. The bedridden patients became ambulatory while the objective signs remained. Disappearance of respiratory symptoms occurred without change in the roentgenologic picture. The average period of remission is 9 to 10 months for those who respond to adrenalectomy, although 10 to 15% had a remission for 2 years and more. Postmenopausal women had a slightly better response than premenopausal women. They should be treated by combined oophorectomy and adrenalectomy, since the ovaries continue to secrete estrogens that can sustain the growth of the breast cancer.

The Management of Bleeding Peptic Ulcer. J. B. Holloway, J. S. Robinson and J. B. Thoroughman. Am. Surgeon 23:195-204 (March) 1957 [Baltimore].

The methods of treatment of 519 out of 1,998 patients with bleeding peptic ulcer admitted to hospital during the period from 1946 to 1955 were outlined. There were 132 patients who did not require surgical treatment; 314 had had sufficient hemorrhage to cause some hematological changes. No operation was performed on 221 patients; 12 of these refused surgical treatment and 6 had complications which precluded any elective surgical procedure. All patients ceased

bleeding promptly on a medical regimen. High subtotal gastrectomy was performed in 46 patients, gastroenterostomy with vagotomy in 9, and hemigastrectomy with vagotomy in 38. Death occurred in one patient, caused by homologous serum jaundice 6 weeks after the operation. Immediate surgical intervention offered the only hope of preventing death in 73 patients. None of the 9 patients who did not undergo surgery survived. Of the 64 patients who underwent surgery, 8 died. High subtotal gastrectomy was performed on 26, hemigastrectomy with vagotomy on 36, and ligation of the bleeding artery on 2. Postoperative complications occurred in 43 of these patients. Massively bleeding peptic ulcer is most effectively managed by a medicosurgical team. Surgical treatment, if elected, should be performed without delay. Blood and fluid should be administered generously preoperatively but rather conservatively after operation. Diagnosis should be confirmed by roentgenographic examination, if possible; otherwise by surgical exploration. The ulcer should be removed or exteriorized at the time of surgery. Blind gastrectomy may be indicated in certain cases. Hemigastrectomy with vagotomy was the surgical procedure that offered the best immediate and long-term results.

Colotomy, Coloscopy, and Colectomy in the Management of Polyps of the Large Intestine. S. McLanahan and R. E. Martin. Ann. Surg. **145**:689-698 (May) 1957 [Philadelphia].

The authors report on 3 women between the ages of 37 and 50 years with polyps of the colon. A pedunculated polyp at the level of the junction of the descending colon and sigmoid was revealed by an air-contrast study and confirmed by colotomy in the first patient; a transfixion suture was placed at the base and the polyp excised. Two and a half years later the patient was symptom-free and well. Sigmoidoscopy revealed a large polyp with a moderately broad base, 15 cm. above the anal margin, in the second patient. On laparotomy the polyp could be moved within the colon over a range of approximately 7.5 cm. Because of its size and the sessile nature of the base, resection was carried out, with removal of a segment approximately 12.7 cm. in length with the adjacent mesentery. Coloscopy was done by passing a proctoscope proximally for 12 cm. No other polyps were seen. End-to-end anastomosis was accomplished and the abdomen closed. The patient has been followed up for 1 year after the operation and has remained well. In the third patient, with a 3-year history of blood and mucus in the stools, a deformity in the rectosigmoid areas was revealed by roentgenographic examination and interpreted as caused by diverticulitis. Because of the suspicion that the diverticulitis was masking carcinomatous lesions, a partial left colectomy was performed. It revealed many polyps of varying sizes associated with diverticulosis and diverticulitis. Further resection was carried out to the midtransverse colon, and again the intestine contained scattered polyps. The remaining proximal portion of the colon was then removed, and a few additional polyps were found. The ileum was anastomosed end-to-end with the upper part of the rectum. Pathological examination of the operative specimen revealed multiple papillomas showing early carcinomatous changes in one large pedunculated papilloma. Sigmoidoscopy was performed 5 years after the operation and did not reveal any polyps.

Three matters are of special interest with regard to polypoid disease of the colon: (1) the close relationship which adenomatous polyps and papillary tumors bear to carcinoma; (2) the more frequent occurrence of multiple polyps than has been generally appreciated; (3) the indications that cancer of the large intestine and rectum is among the most frequently occurring cancers in man. For the uncomplicated pedunculated adenomatous polyp, colotomy and polypectomy is usually adequate treatment, though exceptions exist and there is a growing tendency to carry out segmental resection more often. The solitary sessile polyp usually is best managed by segmental resection. The surgeon is under obligation to determine the presence or absence of other polyps. In addition to palpation, transillumination, and direct examination of the exposed lumen, coloscopy is an available and helpful method. Despite certain disadvantages, more frequent employment of this maneuver is encouraged. The trend in treatment of multiple polyps in the colon is toward a more radical approach in order to effect better cancer prophylaxis. Abdominal colectomy and ileoproctostomy may often be the procedure of choice. Evidence is available to indicate that satisfactory function of intestine can be expected. Surgical judgment is needed in the selection of patients for this radical approach.

Ligation of the Inferior Vena Cava in Decompensated Mitral Heart Lesions. E. N. Meshalkin and B. E. Imnaishvili. Khirurgiya **33**:36-45 (No. 4) 1957 (In Russian with English summary) [Moscow].

The authors report their experience with ligation of the inferior vena cava in patients with mitral insufficiency in whom radical surgical interventions were contraindicated because of grave conditions caused by decompensation. Ligation of the inferior vena cava was performed in 70 patients, but 20 of these patients died. In order to reduce the risk involved and to be better able to judge the indications and contraindications to this operation, a preparatory physiological test was carried out. Cuffs that interrupted the venous return for varying periods of time were applied to both thighs. The venous stasis was gradually increased to 2 hours in the course of 1 week. It was found that ligation is contraindicated in patients in whom the condition becomes worse when the cuffs are applied, in that there is a decrease in arterial pressure, an increase in dyspnea, and the cardiohemodynamics show deterioration.

The patients were operated on under local anesthesia by an extra-abdominal approach with the patient lying on his left side. Eleven of the 20 deaths occurred in patients who were in the late stages of the disease, that is, when decompensation had become irreversible. In 15 patients in whom ligation of the inferior vena cava was carried out because their condition was too grave to permit a commissurotomy, this operation was performed from 3 to 8 months after the ligation, with death resulting in 3 of them. The authors regard ligation of the inferior vena cava as a

palliative measure for those patients in whom the radical operation (commissurotomy) is contraindicated. It benefits these patients because it improves the circulation.

Determination of the Portal Pressure by Puncture of the Spleen. E. I. Halperin. Khirurgiya 33:109-114 (No. 4) 1957 (In Russian with English summary) [Moscow].

The determination of the portal pressure has become important since surgical methods have been developed for the treatment of cirrhosis of the liver. It is an aid in establishing the diagnosis, and it indicates the advisability of surgical treatment. The fact that the red pulp of the spleen is connected with the veins of the portal system in the spleen suggested that measurement of the pressure in the spleen must also show the correct value of the portal pressure. To verify this, tests were made on 22 dogs and 6 rabbits. The pressure in the portal vein was taken simultaneously. The pressure in the spleen ranged from 100 to 220 mm. H_2O and the portal pressure from 102 to 220 mm. H_2O, that is, they were practically identical. Later this method of measuring the portal pressure by puncture of the spleen was tried in 9 patients with cirrhosis of the liver. The method caused no complications, either in the patients or in the laboratory animals.

NEUROLOGY & PSYCHIATRY

Spread of Poliovirus Infection During an Epidemic of Unusual Severity: Woodbury County, Iowa, and Dakota County, Nebraska, 1952. P. F. Wehrle, W. McD. Hammon, L. L. Coriell and R. M. McAllister. Am. J. Hyg. 65:386-403 (May) 1957 [Baltimore].

Studies of the evaluation of Red Cross gamma globulin in the prophylaxis of poliomyelitis afforded an opportunity for detailed study of the epidemiology of the disease. For that study areas were selected on the basis of an unusually high incidence of poliomyelitis with a relatively high proportion of paralytic involvement. Since these studies afforded an unusual opportunity for careful and detailed follow-up by a single group of investigators over a relatively long period of time, the epidemiologic findings are believed to be of value. They are presented here for Woodbury County, Iowa, including Sioux City, and for Dakota County, Nebraska, including South Sioux City. The principal industry for the two-county rural area is general farming, while the chief industries of the urban area are manufacturing and meat processing. A review of the water supply, sewage disposal and general sanitation of the area did not disclose factors of likely significance in the epidemiology of poliomyelitis. An outbreak of type 1 poliomyelitis of unusual intensity that occurred in this 2-county area in 1952 is described. Unusual features noted were extremely high age-specific and total infection rates and unusually high paralytic and bulbar rates. This outbreak followed 6 years of unusually high poliomyelitis incidence in this same area. Yet even following this 7-year period, serologic evidence indicated that many susceptible children remained in this area. The follow-up study differed somewhat depending upon the age group of the patient and the date of onset of the illness. All patients in the 1-to-11-year age group were seen by members of the study team. Those with onset prior to the date of the injection clinics (July 21 to July 26) were seen as time permitted later during the course of the epidemic and a detailed muscle evaluation was done. Patients outside the 1-to-11-year age group were seen as time permitted. The hospital records were reviewed. Gamma globulin did not appear to prevent inapparent infection with poliomyelitis virus, since age trends during the latter portion of the epidemic were similar to those during the earlier course of the outbreak. Epidemiologic evidence is presented which suggests that the opening of schools during the epidemic period did not change the course or age trends of the outbreak. Epidemiologic and serologic evidence presented suggests that the poliomyelitis virus active in this area during 1952 was one with unusual pathogenic properties, probably leading to clinically recognized disease in about 5 per 100 susceptible children infected.

Studies on the Development of Natural Immunity to Poliomyelitis in Louisiana: II. Description and Analysis of Episodes of Infection Observed in Study Group Households. H. M. Gelfand, D. R. LeBlanc, J. P. Fox and D. P. Conwell. Am. J. Hyg. 65:367-385 (May) 1957 [Baltimore].

This is the second of 2 reports, in the first of which a plan for studying the circumstances relating to the natural acquisition of specific immunity to poliomyelitis was presented. This plan, basically, provided for the observation during the early years of life of about 150 newborn infants (index children) in as many households selected to be representative with respect to residence in one of 3 study areas (New Orleans, Baton Rouge, and the Evangeline area), family size, race, and socioeconomic status. Information concerning the entire household, as well as blood and stool specimens from the index children, were collected monthly as a routine. Serums were obtained from all household members on admission to the study and annually thereafter. As infection of the index child was detected, families were revisited to obtain both added information and specimens (blood and stool) from all household and indicated extrahousehold contacts. Standard tissue-culture methods were employed both for detection of neutralizing antibodies in serums and for isolation of polioviruses from stools. All statements as to virus isolation are based ultimately upon the use of cultures containing primary growth of monkey kidney cells since, although HeLa cell cultures were used exclusively initially, all specimens failing to yield virus in this system were retested in kidney-cell cultures.

This second report presents data relating to 114 documented household episodes of poliomyelitis virus infection involving 133 young children in a study of the acquisition of natural immunity to poliomyelitis in southern Louisiana from 1953 through 1955. Infections with the 3 serotypes of poliomyelitis virus occurred in children of all ages from 23 days upwards, with no apparent effect of maternally derived antibody and

no significant predilection for any age group. They occurred throughout the year, but with a marked peak in late summer. There were distinct differences in type prevalence in the 2 years 1954 and 1955 and in the various areas in any one year. These variations are believed to have resulted from relative deficiencies in type-specific seroimmunity in the preschool-age child population. There were also marked differences in the relative predominance of the 3 types of virus in silent immunizing infections as compared with that in clinical infections. This was believed to reflect the importance of strain virulence in the causation of disease, type 2 being especially deficient in virulent strains. The observations of 1954 and 1955 do not give the same picture of the relative importance of family size and socioeconomic status in their effect on infection rates. In 1954, family size seemed to be of greater importance and in 1955, socioeconomic status, but both factors are believed to predispose to early infection.

Virus was isolated from at least 92% of infected index children. The mean duration of fecal virus excretion was estimated as 51 days. Infections in household associates of index children showed a 92% infection rate in individuals previously nonimmune, and a greater than 20% rate of reinfections in immune persons. Evidence for reinfection consisted of significant rises in neutralizing antibody titer, demonstration of virus excretion, or both. However, because of the relative infrequency with which virus was recovered from reinfected persons, it is felt that reinfection is of little or no importance in virus dissemination. Although almost universal infection of the nonimmune members of a household where poliomyelitis virus is introduced is believed to be the rule, a number of examples of abortive household epidemics are cited. Closely associated households are usually infected simultaneously or shortly following one another. No significant clinical disease was associated with the 244 primary infections and 65 reinfections documented in this study. Minor illness was probably associated in 27%. A concept of the dissemination of poliomyelitis viruses through the community was presented.

Platybasia. W. Kiær. Ugesk. læger 119:456-458 (April 11) 1957 (In Danish) [Copenhagen].

The case of platybasia in a man aged 44 with progressive neurological symptoms for 21 years had been interpreted as disseminated sclerosis. The changes in the occipital foramen and adjacent bones found at autopsy established the diagnosis of typical platybasia. The tendency for basilar impression to masquerade as syringomyelia or disseminated sclerosis is stressed. In most cases of platybasia there is a primary anomaly in the development of the base of the skull which, as a rule, does not manifest itself before adult age. Paget's disease is thought to be the most frequent cause of secondary platybasia, which is also seen in osteomalacia, hyperparathyroidism, and osteogenesis imperfecta. Roentgen examination of the cranium can give a certain diagnosis of platybasia. The diagnosis is often missed simply because the disease is not looked for (Scoville and Sherman). The condition can be improved by operative treatment.

THERAPEUTICS

Studies of the Use of Glyco-Algin as a Solution for Transfusion. T. Takayama. J. Internat. Coll. Surgeons 27:557-567 (May) 1957 [Chicago].

Glyco-Algin was prepared by dissolving 0.3% sodium alginate in 5% dextrose. It was adjusted to maintain a specific viscosity of 2 and a molecular weight of 15,000. Rabbits and dogs were bled at the rate of 20 cc. per kilogram of body weight in 6 minutes and per minute, respectively, and Ringer's solution, dextrose solution, alginate sodium chloride solution, and Glyco-Algin were administered as supplementary fluids in equal volumes by slow (drip) transfusion or by rapid transfusion. The results obtained with these 4 supplementary fluids were compared and showed that Glyco-Algin is an ideal transfusion solution in that it causes a sufficient increase in blood pressure, maintains the blood pressure at an even level, restores and maintains the circulating blood and plasma volumes, and stabilizes the elimination of urine and the carbohydrate metabolism without changing the level of extracellular fluids. The limit of speed of transfusion of a polysaccharide such as Glyco-Algin is 0.6 cc. per minute per kilogram of body weight. This limit, however, is equivalent to 600 cc. per minute in adults, and it is therefore entirely negligible in clinical cases. Three hundred reports on the use of Glyco-Algin as a blood substitute in patients admitted to large hospitals in Japan confirmed the satisfactory experimental results.

The Combination of Rauwolfia Serpentina and a New Xanthine Derivative in the Treatment of Hypertension. T. Rodari. Minerva med. 48:452-457 (Feb. 10) 1957 (In Italian) [Turin, Italy].

Sixteen patients with essential hypertension, 14 with renal hypertension, and 10 with hypertension and cardiocirculatory insufficiency were treated with a combination of Rauwolfia Serpentina and a new xanthine derivative. The average daily dose was 50 mg. of the extract at 8% in total alkaloids of Rauwolfia Serpentina and 600 mg. choline theophyllinate. The combination had a hypotensive effect in 8 patients with essential hypertension; the systolic pressure was reduced by 30 mm. Hg. The combination had a beneficial effect on 9 patients with renal hypertension; the systolic pressure went down 30 mm. Hg. Slight changes were observed in the patients with cardiocirculatory insufficiency; in these patients the diuresis increased from 70 to 80%. The pulse rate was reduced in all patients. Intolerance or side-effects were not observed.

Oral Insulin Substitutes. L. J. P. Duncan and J. D. Baird. Scottish M. J. 2:171-182 (May) 1957 [Glasgow].

It is now widely accepted that the toxic potentialities of carbutamide (BZ 55) preclude its clinical use. Tolbutamide (D 860), however, in which the amino group of carbutamide has been replaced by a methyl group, may be sufficiently free from undesirable attributes to permit its therapeutic application. The long-term effects of tolbutamide or any other hypoglycemic agent which may be produced in the future will have to be critically studied with particular

regard to their possible toxic effects, to the feasibility of giving them indefinitely without loss of effect, and to their influence, if any, on the progression of the degenerative complications of diabetes. If the answer to these questions should prove satisfactory, then their general therapeutic use would be justified. Even then, diabetic patients would still have to restrict their diet and about 50% of them would continue to have satisfactory control by this means alone. To substitute hypoglycemic sulfonamide therapy for dietary restriction would be quite unjustified and would merely encourage the persistence or development of obesity. However, about 70 to 80% of middle-aged or elderly nonobese patients with relatively mild stable diabetes who, in addition to dietary restriction, require a small or moderate daily dose of insulin, would be able to discard their insulin syringes and be treated with tablets taken by mouth. Such patients, however, account for only 1 in every 4 or 5 diabetics presently receiving insulin.

It should be recognized that the hypoglycemic sulfonamides are merely "oral insulin substitutes" for a limited number and type of diabetic patients and they are in no respect "oral insulins." The administration of insulin itself is still the only treatment to which diabetes will always respond, whatever its type or severity. Insulin has withstood the test of time, it is safe and free from toxic attributes, it can be given indefinitely without any loss of effect, and it corrects all the presently known metabolic consequences of diabetes. Any alternative for it should possess all these properties, and it is clear that these sulfonamide derivatives are deficient in several respects. To be influenced or dominated by the preference of diabetics for a new form of treatment simply because it is more convenient and acceptable than the injection of insulin would constitute a disastrous failure in professional responsibility.

In Vivo Effect of Ganglion Blocking Drugs and of Aneurin Administered Separately and in Combination. F. Manca and D. Lolli. Minerva ginec. 9:193-199 (March 31) 1957 (In Italian) [Turin, Italy].

The effect of the ganglion blocking drugs and of aneurin administered separately and in combination was studied with the sphygmogram in a group of male and female cats of the average weight of 3 kg. each. The drugs were injected into the femoral vein and at times into the jugular vein. The animals were under chloralose narcosis. Experiments were carried out with doses of from 5 to 50 mg. per kilogram of body weight of hexamethonium, 8 to 16 mg. per kilogram of N,N,N′-N′-3-pentamethyl-N,N′-diethyl-3-azapentane-1, 5-diammonium dibromide (Pendiomid) and 3 to 110 mg. per kilogram of body weight of aneurin. The ganglion blocking drugs caused a depression of the circulation which was more evident the higher the initial pressure. The hypotension was more marked the higher the dose injected. The effect of the drugs lasted longer when higher doses were administered; the authors think that Pendiomid may have a longer-lasting effect. The ganglion blocking drugs increased the sensibility of the animals to adrenalin. Tension-regulating centers were still efficient even after the administration of a high dose of ganglion blocking drugs. A dose of 3 mg. of vitamin B_1 per kilogram of body weight caused in the animals under anesthesia a moderate and transitional drop of the arterial pressure. Disturbances of respiration were observed with a dose of more than 20 mg. of aneurin per kilogram of body weight and paralysis with a dose of more than 70 mg. per kilogram. The authors believe that ganglion blocking drugs and aneurin given in combination and in a low dose have a longer, even though not so intensive, hypotensive effect and do not cause a rapid drop of pressure.

Antibiotic Combinations: Antibacterial Action of Plasma of Normal Subjects After Oral Doses of Penicillin V, Tetracycline Hydrochloride and a Combination of Both. W. F. Jones Jr. and M. Finland. New England J. Med. 255:869-875 (May 9) 1957 [Boston].

Several definitions of synergism and antagonism have been offered by laboratory workers in their evaluations of the antibacterial or therapeutic action of combinations of antimicrobial agents by comparison with that of their individual components; other terms such as additive, inhibitory, potentiating, and neutral have also been introduced to describe the various types of combined actions. Since none of these comparisons can readily be applied to the results of the use of these agents in the therapy of human infections, the authors approached the problem by assaying and comparing in the same subjects the antibacterial action of blood after administration of antibiotics in the same doses singly and in pairs. The first pair of antibiotics studied was erythromycin and penicillin, the second pair was penicillin G and oleandomycin. This report deals with a third pair—namely, tetracycline and penicillin V in 2 doses (500 mg. and 1,000 mg.).

Each of 5 normal young men took, in random rotation, at intervals of 3 days or more, one or the other total dose of either tetracycline alone or penicillin V alone or equal parts of both. Each subject, therefore, received 6 different doses; each dose was taken half an hour before breakfast. Blood was obtained before and at the same intervals after each dose over a period of 24 hours, and the plasmas were tested for antistreptococcic and antipneumococcic activity. From the data obtained the authors conclude that at any given time after the same total dose the combination of equal parts of tetracycline hydrochloride and penicillin V yielded appreciably less antistreptococcic and antipneumococcic activity and also less antistaphylococcic activity than that which was derived from the same total amount of one or the other individual component. The differences in absorption and excretion of the 2 antibiotics used resulted in the best activity from penicillin V alone during the first few hours after the doses, and tetracycline generally yielded the greatest antibacterial activity thereafter; only occasionally and transiently did the combination produce greater activity than that resulting at the same interval from one or the other single agent.

PATHOLOGY

Radioisotope Determinations of Blood Volume: The Results of More Than 300 Tests. W. Freeman. Am. J. Clin. Path. 27:393-400 (April) 1957 [Baltimore].

The circulating whole blood, plasma, and cell volumes were determined with use of radioactive iodine incorporated in human serum albumin (Risa)

for more than 200 hospitalized patients with serious medical or surgical disease. Some 366 such determinations were made. The method proved to be practical and safe, and it may be repeated daily without harm to the patient. Determinations made with a sample of blood collected 1 minute after the injection of the dilute Risa were more accurate than determinations based on blood collected 5, 10, or 15 minutes after the injection. One hundred twenty-two patients (61%) had normal values for whole blood volume, 112 patients (56%) had circulating plasma volumes in the normal range, and 96 patients (48%) had cell volumes that were estimated as normal. Twenty-four patients (12%) had deficient whole blood volumes, 18 (9%) had deficient plasma volumes, and 50 (25%) had deficient cell volumes. Fifty-four patients (27%) had excessive volumes of circulating whole blood and cells, and 70 (35%) had excessive plasma volumes. This indicates that 150 (75%) of the 200 seriously ill, hospitalized patients were in no need of transfusions of any kind.

In a person with a labile circulating blood volume, the Wintrobe and Risa hematocrit values, the level of hemoglobia, and the red blood cell count are not dependable indications of the need for transfusion of blood. The transfusion of blood or fractions of blood may be disastrous in certain patients. The danger is of major importance in patients who can not tolerate an overloaded volume of circulating blood, such as those who have arterioclerosis, low cardiac reserve, or both. Unless the patient is actively bleeding, one should not administer transfusions of whole blood or its fractions before determining the volumes of circulating whole blood, plasma, and cells.

The Significance of the Non-specific Inflammation in Auricular Appendages of Patients with Mitral Stenosis. C. A. Wagenvoort. Acta med. scandinav. 157:307-318 (No. 4) 1957 (In English) [Stockholm].

One hundred eighteen auricular appendages, removed at valvulotomy from 74 female and 44 male patients between the ages of 11 and 58 years with mitral stenosis, were studied microscopically. Special attention was paid to the incidence of nonspecific inflammatory foci in the myocardium, consisting of lymphocytes and large mononuclear cells. Such foci were found in 36 specimens (30.5%) and appeared to be associated in most of the cases with thrombosis and auricular fibrillation. Aschoff bodies were found in 76 specimens (64.4%). They were observed more frequently in the specimens removed from younger than from older patients. There was in general a negative correlation of Aschoff bodies with nonspecific foci, thrombosis, and fibrillation. Additional microscopic studies were performed on 22 hearts obtained at autopsy of patients with rheumatic mitral stenosis who had been operated on or not and of patients without heart disease. It usually appeared that nonspecific inflammation, if present, was not confined to the left auricular appendage but was also present in other parts of both auricles, even if thrombosis was limited to the left appendage.

The author does not agree with the opinion of other workers that nonspecific inflammatory foci in the myocardium are to be regarded as a nonspecific reaction to the presence of an organized thrombus. His findings showed that such foci seemed to be more closely related to recent than to organized thrombi; that thrombosis of the auricular appendage may occur without any sign of myocarditis; that these foci appeared to have no preference for the vicinity of a thrombus; and that the inflammatory reaction frequently occurred in other parts of the heart though thrombosis occurred exclusively in the left auricle. The author's findings, however, suggest some direct or indirect relation between the various histopathological lesions observed in the auricular appendages on the one hand and auricular fibrillation on the other. One could consider that the presence of the lymphocytic infiltration between the muscular fibers, whatever the cause may be, might bring about a disturbance in the stimulus formation resulting in auricular fibrillation. Another explanation would be that fibrillation is primary, causing anoxemia of the auricle, and that such anoxemia might bring about an inflammatory reaction.

Clinical-Pathologic Study of 76 Cases of Recurrent Graves' Disease, Toxic (Non-exophthalmic) Goiter, and Nontoxic Goiter: Does a Relation Exist Between Thyroid Hyperplasia and Struma Lymphomatosa? H. J. Spjut, W. D. Warren and L. V. Ackerman. Am. J. Clin. Path. 27:367-392 (April) 1957 [Baltimore].

Microscopic sections were studied of residual thyroid tissue removed at repeated thyroidectomies in 71 patients and at autopsy in 5 patients. The interval between thyroidectomies, or the interval between operation and death, for the entire group averaged 6 years, with a range of from 3 months to 23 years. Of the 76 patients, 66 female and 10 male, 35 had Graves' disease, 22 had toxic (nonexophthalmic) goiter, and 19 had nontoxic goiter. An attempt to demonstrate convincingly progression of thyroidal hyperplasia to chronic lymphomatous thyroiditis (Hashimoto's disease), chronic thyroiditis, or Riedel's struma, failed. The second surgical specimen obtained from a 39-year-old woman with nontoxic goiter showed almost diffuse oxyphilia, lymphoid aggregates with germinal centers, and fibrosis; the first specimen removed 3 years previously had shown a degenerating adenomatous nodule. The surrounding parenchyma showed lymphoid follicles with only focal oxyphilia of follicle cells. This is the only case in which a diagnosis of chronic lymphomatous thyroiditis was made; it seems likely that, if an early phase of this disease exists, the first specimen has been an example of it and that the second specimen represented the typical appearance of the disease. There is no evidence of transition from hyperplasia to lymphomatous goiter.

Microscopic changes of severe exhaustion atrophy were observed in the second specimen obtained from 2 patients with Graves' disease, 2 with toxic (nonexophthalmic) goiter and 3 with nontoxic goiter. There were foci of oxyphilic cells, lymphoid follicles with germinal centers, lymphoid aggregates, fibrosis that often accentuated the lobular pattern, plasma cells, macrophages, neutrophils, and eosinophils. These

7 cases most closely simulated chronic lymphomatous thyroiditis, but the outstanding microscopic features which distinguished them from cases of chronic lymphomatous thyroiditis were the different histological stages of involution and usually a lack of diffuse or nearly diffuse oxyphilic change of the follicular epithelium. Except for these 7 cases, no distinctly specific microscopic changes that would distinguish the first from the second specimen were noted in the thyroidal remnants of the patients with the 3 types of disease of thyroid gland. Lymphoid tissue was seen in thyroid glands of patients with each of the 3 types of thyroid disease, increasing only slightly in the second and third specimens. When present in the first specimen it was also present in the second specimen. Oxyphilic cells (Hürthle cells) were seen in thyroid glands obtained from patients with each of the 3 disease types and were not correlated with any outstanding alteration in the clinical course. The course of exophthalmos could not be predicted from the histological findings. The presence of lymphoid follicles in thyroid glands of patients with Graves' disease was associated with a longer interval between operative procedures. This was not true for the other 2 disease groups. Histological alterations due to therapeutic agents could not be evaluated because most patients had been treated with more than 1 agent, and the doses used and the duration of treatment varied.

Relation Between Pyelonephritis and Bacterial Counts in the Urine: An Autopsy Study. R. A. MacDonald, H. Levitin, G. K. Mallory and E. H. Kass. New England J. Med. **256**:915-922 (May 16) 1957 [Boston].

The clinical diagnosis of pyelonephritis is often overlooked due to the absence of overt clinical manifestations of pyelonephritis in many patients. Bacterial counts of the urine have been performed in an attempt to add to the objective methods for determining the presence of infection of the urinary tract. Clinicians have long been aware of the fact that clinically evident infections of the urinary tract are accompanied by sufficiently large numbers of bacteria to permit them to be found readily upon microscopic examination of the urinary sediment. Similarly, the urines of patients in whom a clinical diagnosis of active pyelonephritis is made have almost invariably been found to contain more than 100,000 bacteria per milliliter. The authors performed bacterial counts of the bladder urine in 100 unselected autopsies and correlated them with the pathological data. Forty per cent of the urines obtained at autopsy by needle aspiration of the bladder contained more than 100,000 bacteria per milliliter, 53% contained no bacteria, and 7% contained between 10 and 10,000 bacteria per milliliter. Active pyelonephritis was found in 14 of the 40 patients with 100,000 or more bacteria per milliliter of urine (who were considered to have true bacteriuria) and in but 3 of 60 patients with no or relatively few bacteria. Three cases of acute cystitis without pyelonephritis were encountered; all were associated with 100,000 or more bacteria. The predominant micro-organism in the urine at autopsy was Aerobacter aerogenes, and there had been little tendency for the organism to disappear with treatment in the patients studied.

Antimicrobial therapy was given up to at least 24 hours before death in 60 to 70% of patients, but the beneficial effects of such therapy on the course or frequency of pyelonephritis were limited. Healed pyelonephritis occurred in 18% of patients, and the prevalence of this lesion bore no relation to that of bacteriuria. A total of 33% of the patients gave evidence of active or healed pyelonephritis. Benign prostatic hypertrophy was associated with bacteriuria in only 9 of 26 patients in whom the prostatic lesion was found, and active pyelonephritis that was associated with benign hypertrophy occurred only in association with bacteriuria. A substantial correlation between bacteriuria, pyelonephritis, and inlying catheterization was demonstrable. Clinical diagnosis of active infection of the urinary tract was not made in 70% of patients in whom active pyelonephritis occurred. In many of those in whom the diagnosis was not suspected, extensive pyelonephritis, sufficient to be a major cause of death, was found. Such evidences of infection of the urinary tract as pyuria, azotemia, the presence of granular casts and albuminuria are not reliable indexes of the presence or absence of bacteriuria or of active pyelonephritis. No relation between hypertensive heart disease, cardiomegaly, or elevated diastolic pressures and bacteriuria was demonstrable. It is concluded that bacterial counts are a reliable means for detecting true bacteriuria and that such bacteriuria is often associated with active infection of the kidneys and other structures of the urinary tract.

Neuroblastoma and Related Tumors. S. Lindsay and I. T. Chaikoff. A. M. A. Arch. Path. **63**:451-459 (May) 1957 [Chicago].

An attempt was made to clarify the interrelations of the tumors of the sympathetic nervous system. A series of 236 patients were studied. Follow-up examinations were made on 206 and completed on 87. According to histological and cytological criteria the tumors were divided into 3 groups: neuroblastoma, ganglioneuroblastoma, and ganglioneuroma. The symptoms manifested by neuroblastoma and ganglioneuroblastoma were essentially alike. They were gastrointestinal (49%), respiratory (20%), skeletomuscular (20%), hemic (20%), dermal (8%), and urinary (2%). Only 8% of the 121 patients had no symptoms; the tumor was discovered on physical or x-ray examination. Forty per cent of the 109 patients with ganglioneuroma had symptoms referable to the tumor. Almost all of these tumors were respiratory and occurred in patients with mediastinal neoplasms. All tumors in this group were benign.

Congenital neuroblastoma occurs within the first 6 years of life and is fatal in 70% of the cases. The ganglioneuroma is a benign tumor and occurs chiefly in adults. The ganglioneuroblastoma is a tumor which combines features of both normal ganglionic tissue and neuroblastoma. It is likely to be a manifestation of either a lower degree of malignant degeneration of a neurogenic sarcoma or a partial degree of differentiation of a neuroblastoma. It is fatal in 69% of the cases. A differentiation between these tumors appears justifiable because of the real differences in their biological behavior.

BOOK REVIEWS

The Principles and Methods of Physical Diagnosis: Correlation of Physical Signs with Certain Physiological and Pathological Changes in Disease. By Simon S. Leopold, M.D., Professor of Clinical Medicine, School of Medicine and Graduate School of Medicine, University of Pennsylvania, Philadelphia. With chapter on Sounds from the Thorax: Acoustic Principles, by S. Reid Warren, Jr., Sc.D., Professor of Electrical Engineering, Moore School of Electrical Engineering, University of Pennsylvania. Second edition. Cloth. $9. Pp. 537, with 404 illustrations. W. B. Saunders Company, 218 W. Washington Sq., Philadelphia 5; 7 Grape St., Shaftesbury Ave., London, W. C. 2, England, 1957.

In this day when there are cries that too much dependence is placed on laboratory diagnosis, a book that stresses what can be learned by questioning and by the use of eyes, ears, and sense of touch is welcome. Bedside diagnosis is still an important part of medical practice, and physical diagnosis is something about which the undergraduate or the practitioner can not learn too much. Basic understanding plus practice and experience are essential to practice in any field. This book, without wasted words, in interesting style, provides the essentials of physical diagnosis. Many illustrations, some of them in color, supplement the written word. When used with the teacher's lecture or for independent reference, this book should provide much helpful guidance.

Retirement: A New Outlook for the Individual. By Gifford R. Hart. Cloth. $3.95. Pp. 179, Harcourt, Brace & Company, 383 Madison Ave., New York 17, 1957.

This book apparently is intended to help persons to look forward to retirement and to plan for it. Many wait until the day for retirement arrives before they give much thought to it. As a result, they often feel lost and unhappy. Those who have planned for what can be one of the most enjoyable parts of the span of life can find many things that can keep them busy and happy and perhaps as productive as at any time of their life. The author of this book sets forth some interesting philosophy on this subject, and he makes his points with few wasted words and yet with a style of presentation which is interesting and provocative.

The Diagnosis and Treatment of Endocrine Disorders in Childhood and Adolescence. By Lawson Wilkins, M.D., Associate Professor of Pediatrics, Johns Hopkins University, Baltimore. Second edition. Cloth. $17.50. Pp. 526, with illustrations. Charles C Thomas, Publisher, 301-327 E. Lawrence Ave., Springfield, Ill.; Blackwell Scientific Publications, 24-25 Broad St., Oxford, England; Ryerson Press, 299 Queen St., W., Toronto 2B, Canada, 1957.

This is an extensive revision and expansion of the first edition which appeared in 1950 and which has become a classic in pediatric endocrinology. In this revision the general pattern of presentation of the subject by means of case reports is followed as in the previous edition, but the theoretical background of the subject has been greatly enlarged so that the present volume may truly be classed as a textbook on pediatric endocrinology. Of particular interest are the expanded discussions of sex chromatin, metabolism, the adrenogenital syndrome, the abnormalities in gonadal function, and a newly added chapter on diagnostic methods. Differential diagnosis is stressed. The author has made notable contributions in this field. The book is well written, beautifully illustrated with original pictures of clinical material, and artistically printed. This volume should be in the hands of all those engaged or interested in the treatment of endocrine disorders and can be recommended as the most authoritative and up-to-date presentation of the subject available.

The Eye in General Practice. By C. R. S. Jackson, M.A., B.M., B. Ch., Ophthalmic Surgeon, Royal Infirmary, Edinburgh. Cloth. $5. Pp. 152, with 25 illustrations. E. & S. Livingstone, Ltd., 16 and 17 Teviot Place, Edinburgh 1, Scotland; [Williams & Wilkins Company, Mount Royal and Guilford Aves., Baltimore 2], 1957.

This little volume, a condensed version of a classic textbook on ophthalmology of 10 years ago, was compiled "with the special needs of the general practitioner in mind," and it also is just what is needed for nurses, school teachers, optometrists, opticians, and parents, for it gives in clear language the pertinent facts about the eye and its disorders. Anatomy, physiology, and mathematical optics are barely touched on and then only in terms familiar to lay persons. Only the most common of eye diseases are mentioned. There is no mention of "indications for surgery" nor directions for treatment of any disorder. The chapter on diseases of the eye is short but excellent for first aid attendants, school physicians, and country doctors who must be able to care for the simple disorders and leave the complicated cases to the specialist with modern hospital facilities. A short chapter on the eye in diseases of other parts discusses briefly but comprehensively the role of the eye in diseases of the cardiovascular system and in intracranial, endocrine, and metabolic disorders and other conditions. The last chapter deals with administrative problems of the local British Public Service to the visually handicapped. The book is the answer to the inquiry of the high school student who writes, "please send me all information about the eyes as I'm writing a paper."

The Specialties in General Practice. Edited by Russell L. Cecil, M.D., and Howard F. Conn, M.D. With articles by William A. Barnes, M.D., and others. Second edition. Cloth. $16. Pp. 780, with 76 illustrations. W. B. Saunders Company, 218 W. Washington Sq., Philadelphia 5; 7 Grape St., Shaftesbury Ave., London, W. C. 2, England, 1957.

This second edition shows the results of the editors' devoted attention to the audience for which the volume is intended. Various specialists have contributed, always with the general practitioner in mind. The book is intended as a handy reference book and contains brief discriptions of various problems encountered in the fields in which the general practitioner usually

These book reviews have been prepared by competent authorities but do not represent the opinions of any medical or other organization unless specifically so stated.

works. It is not complete for the various specialties nor is it intended to be, as only the less serious but more commonly encountered problems are discussed. The book is amply illustrated and is offered in an easy-to-read style so that the reader, whether he is looking up something in minor surgery, orthopedic surgery, pediatrics, psychiatry, or any other subject, will not feel that he is "wading" through some deeply technical material but rather is receiving practical guidance for quick assimilation.

Diagnosis and Treatment of Cardiovascular Disease. Volumes 1 and 2. Edited by William D. Stroud, M.D., F.A.C.P., Professor of Cardiology, University of Pennsylvania Graduate School of Medicine, Philadelphia, and Morris W. Stroud III, M.D., Associate Professor of Medicine, Western Reserve University, Cleveland. Contributors: Edgar V. Allen, M.D., and others. [Fifth edition.] Cloth, loose-leaf. $35. Pp. 719; 1001-1702, with illustrations. F. A. Davis Company, 1914-16 Cherry St., Philadelphia 3, 1957.

This loose-leaf presentation is edited by well-known cardiologists who have received the help of about 60 contributors, each an expert in his own field. The present edition represents an attempt to bring the volumes up to date, the loose-leaf binding being used to permit continuous revision. This is an excellent book for the student or practitioner, whether he be in general practice or a specialty. The book is amply illustrated, has been prepared with a pleasing type, and has a complete index. Of great interest to those who like to peruse the literature will be the lists of references at the end of many of the chapters; some are extremely complete.

Basic Nutrition. By E. W. McHenry, M.A., Ph.D., F.R.S., Professor of Public Health Nutrition, School of Hygiene, University of Toronto, Toronto. Cloth. $5. Pp. 389, with 9 illustrations. J. B. Lippincott Company, 227-231 S. Sixth St., Philadelphia 5; 2083 Guy St., Montreal, Canada; Pitman Medical Publishing Company, Ltd., 45 New Oxford St., London, W. C. 1, England, 1957.

More useful information is contained in this book than is generally found in similar textbooks prepared for university or nursing students. This usefulness stems, no doubt, from the intent of the author to avoid generalities. The material has been prepared with the basic assumption that human requirements for nutrients do not vary with race or nationality; when treating differences in nutrient requirements in health and diseases, one must also consider the geographical region and environment. This book was prepared to enable the reader to adapt the specific information given to his own particular circumstances. This approach should make the book a valuable reference for those who have either a casual or working relationship with nutrition. It is a well-documented and up-to-date book, but, in addition to the basic-seven food groups, reference might well have been made to the concept of four groups recently introduced in this country by the United States Department of Agriculture.

After a thorough introduction to the utilization, requirements, and sources of the important nutrients, the author discusses the practical application of the knowledge. The physician concerned with nutrition should be especially interested in several of the later chapters. There is a concise chapter on special diets followed by one on the evaluation of nutritional conditions. A discussion of studies of food intake, determination of nutritional status, and biochemical methods for the appraisal of nutritional status will be found in the latter chapter. The final chapter, which has world-wide significance, is concerned with the causes and prevention of malnutrition. This chapter and a table of the composition of foods conclude this fine work on basic nutrition.

Clinical Roentgenology of the Digestive Tract. By Maurice Feldman, M.D., Assistant Professor of Gastroenterology, University of Maryland, Baltimore. Fourth edition. Cloth. $15. Pp. 776, with 728 illustrations. Williams & Wilkins Company, Mount Royal and Guilford Aves., Baltimore 2, 1957.

The revision of this standard reference in roentgenology of the digestive tract has been extensive. It incorporates the newer developments in this field since the last edition, eight years ago. All of the digestive tract, its associated organs and its environment are discussed. The mode of presentation is that established in the preceding edition. Not only are the roentgenologic findings emphasized but the pathological, surgical, and clinical aspects are also considered. Numerous rare conditions, information about which is obtained with difficulty from other sources, are described. Each subchapter is followed by a bibliography. Statistical information is available for most of the disease processes. Only the essentials regarding methods are given. The illustrations, though not numerous, should be adequate. Double column format is used. This book should be useful to the internist for whom it was primarily written. Roentgenologists will find the comprehensive nature of the material a valuable addition to the reference library. This book, in view of the central role of roentgenology in the diagnosis of the gastrointestinal diseases, may well be recommended to every physician who is interested in this field.

The Ciba Collection of Medical Illustrations. Volume 3: A Compilation of Paintings on the Normal and Pathologic Anatomy of the Digestive System. Part III: Liver, Biliary Tract and Pancreas. Prepared by Frank H. Netter, M.D. Edited by Ernst Oppenheimer, M.D. Cloth. $10.50. Pp. 165, with 133 color plates. Ciba Pharmaceutical Products, Inc., 556 Morris Ave., Summit, N. J., 1957.

This volume represents a compilation of paintings and colored drawings of the normal and pathological anatomy of the organs mentioned. On each page, next to the illustration, is a concise explanation. Chapter subjects include normal anatomy, physiology and pathophysiology, hepatic and pancreatic function tests, diseases of the liver, diseases of the gallbladder and bile ducts, and diseases of the pancreas. The text and illustrations have been prepared in consultation with Oscar Bodansky, Eugene Clifton, Donald Kozoll, Hans Popper, and Victor M. Sborov. These outstanding authorities add to the stature of the book. The illustrations are clear, instructive, and well printed. They cover, in a relatively comprehensive fashion, the subjects involved, although illustrations of this sort may depart, in certain instances, from the situation observed in photographs. This book should serve a useful purpose, particularly as a teaching medium and also as an instructive volume, for anyone interested in the field.

QUERIES AND MINOR NOTES

TREATMENT OF CHRONIC VARICOSE ULCERS

To the Editor:—*Kindly comment on the treatment of chronic, recurring varicose ulcers by using plasmin, a blood plasma enzyme. Is this similar to preparations of trypsin?*

E. G. Hubin, M. D. Sandstone, Minn.

Answer.—When a varicose ulcer fails to heal or keeps recurring, a variety of factors need to be considered. Most frequently one finds a postphlebitic ulcer, which rides on an incompetent perforator vein and is surrounded, nay strangled, by a fibrous ring and lymphatic stasis. When such ulcers are widely excised, the offending perforators are ligated flush with the deep fascia, and a three-fourths-thickness skin graft heals well and firmly but necessitates at least three weeks of bed rest. Additional venous segments creating congestion may need to be stripped. Chronic leg ulcers may also fail to heal because of arteriolar sclerosis with or without hypertension. Sympathectomy may help, but naturally some metabolic disorders, such as diabetes or lipemia, need to be controlled.

When it comes to local treatment, necrotic bases may be digested with streptokinase, trypsin, or plasmin. The latter, frequently called fibrinolysin, is the fibrinolytic enzyme of the blood, which, when activated, does dissolve clots and necrotic tissue. In the gangrenous heels of diabetics, enzymatic dédridement does yeoman's service. If, however, the underlying cause of the ulcer is a high postural venous pressure, the skin will break down again until the incompetent perforators are eliminated.

PENILE DEFORMITY AFTER TRANSURETHRAL PROSTATECTOMY

To the Editor:—*A 56-year-old man had a transurethral prostatectomy two years ago, followed by angulation deformity of the proximal third of the penis eight months later. He received a number of corticotropin (ACTH) injections, with no benefit. British physicians are said to have some gadgets to straighten the penis so that a patient can have coitus. What can be done now?* *S. L. Betagole, M.D., Cincinnati.*

Answer.—The deformity described which occurred after transurethral prostatectomy usually is caused either by postoperative stricture of the urethra or by the development of plaques in the corpora cavernosa known as induration of the corpora cavernosa (Peyronie's disease). If a no. 24 sound passes through the urethra easily, the stricture, of course, is eliminated. Treatment for this disease often is unsuccessful. External application of radium probably gives the best results. One would question the efficaciousness of any gadget that would straighten out penile deformity.

The answers here published have been prepared by competent authorities. They do not, however, represent the opinions of any medical or other organization unless specifically so stated in the reply. Anonymous communications and queries on postal cards cannot be answered. Every letter must contain the writer's name and address, but these will be omitted on request.

RECURRING INFECTIOUS THROMBOPHLEBITIS

To the Editor:—*A woman, aged 53 years, recently developed a slight pain in the right calf. This gradually grew worse and became painful on walking. Three weeks after the onset she developed chills; her temperature was 101 F (38.4 C), and there was severe pain on the right side of the lower chest over the liver. She had no cough. She was hospitalized and the right leg elevated. Treatment consisted of hot applications to the leg and the administration of Achromycin (by mouth), heparin, and Dicumarol. X-ray of the chest showed involvement of the right lower lobe, and there was a pleural-like friction sound on the right side of the lower chest. After two weeks of treatment the symptoms in the lung disappeared and the pain in the leg was not so severe; the temperature was normal. Two days later the patient was allowed to sit up for an hour in the morning and the afternoon and was made to walk a few times about the room. Two days after she was up and walked she had a relapse, with severe pain in the leg and inguinal region on the right side, nausea, chills, temperature of 101 F, and a feeling of pressure over the urinary bladder with frequent urination (every half hour). She was put to bed for three weeks, the foot of the bed being elevated and hot applications being applied to the right leg. At the end of that period she was completely without symptoms and was discharged from the hospital, with instructions to stay in bed most of the time. One week after the patient went home she got up to entertain a friend. She stayed up several hours and walked up and down the stairway several times. The next day she had a relapse, with severe pain over the bladder, frequent urination, pain in the leg, and a temperature of 100 F. After she stayed in bed four to five days, the symptoms disappeared again. Now, if she stays up very long, she develops pains over the bladder and has to urinate frequently. At present she wears elastic stockings when she gets up. As long as she stays in bed, she is asymptomatic. She takes Dicumarol, 50 mg. every other day. The right leg is still swollen. Please explain the pain and pressure feeling over the bladder with frequent urination. How long will it take for the swelling in the leg to disappear, and when will she be able to do any kind of work and be free of the above symptoms? Is it advisable to discontinue the administration of Dicumarol? At present, the prothrombin time is 20% of normal. Please suggest another treatment for this condition.* *D. J. Louis, M.D., Chicago.*

Answer.—In this case one is dealing with a patient who presumably had three episodes of recurring infectious thrombophlebitis. With the first attack, she had a pulmonary infarction. Subsequently, there was a history of recurring bouts of chills and fever when the patient resumed activity. This also was associated with pains in the suprapubic region and frequent urination.

The frequency of urination and the discomfort in the suprapubic region may not necessarily be due to the thrombophlebitis. It is quite possible that the patient has some infection in the urinary tract. This may be in the bladder itself or in the kidneys. The possibility of a pyelitis or pyelocystitis cannot be excluded until further studies are carried out, such as examination of the urine sediment and culture and cytoscopic examination; in many cases, a pyelogram may be helpful. The repeated bouts of chills and fever could very well be due to some infectious condition of the urinary tract. If any of the findings are present, then broad-spectrum antibiotics, such as Furadantin, 50 mg. four times a day after meals and at bedtime, or Gantrisin may be helpful.

The swelling of the leg is most likely due to the recurring infectious thrombophlebitis, and this patient may be developing a chronic phlebitic syndrome. An elastic support should be recommended, and its use should be continued for an indefinite period, particularly when the patient is on her feet and walking about. The swelling may continue for some length of time. However, it may be controlled if intensive overall treatment is instituted. This consultant is partial to giving Mecholyl iontophoresis for a series of 10 treatments and use of the oscillating bed, if available. The patient should also continue receiving vasodilators, such as Priscoline, 25 to 50 mg. three times a day before meals, or Arlidin, 6 mg. three times a day before meals, and papaverine, 1 or 1½ grains (60 or 100 mg.) four times a day after meals and at bedtime. If the condition persists, it is suggested that one of the enzyme preparations, either Parenzyme or Chymar, 5 Gm. daily for a series of 10 treatments, be injected intramuscularly. The patient should be advised to sleep with the feet elevated, and smoking obviously is interdicted. The patient is permitted to resume work after three or four weeks of therapy and two weeks of convalescence.

The administration of Dicumarol is recommended for three to six months, depending upon the progress of the patient. Should the episodes of chills and fever be proved to come from some bladder infection, then the treatment may be discontinued; however, if it is decided that these symptoms are definitely recurring phlebitis attacks, then it should be continued for at least three months or longer, if necessary. Needless to say, the dosage of Dicumarol will be guided by the prothrombin time, which should be determined once a week or every 10 days. In hospital patients, 20% levels are optimal; however, when a patient is ambulant or is not under daily supervision, then levels of 30% or even 40% would be satisfactory. In the high levels, 50-mg. doses are recommended. In levels in the 20's, 25 mg. is preferred in order to avoid side-effects.

As for further treatment, this has practically been answered in the above paragraphs: antibiotic therapy, particularly directed toward any possible infection, either in the bladder or elsewhere; treatment of the vein disorder with anticoagulants, elevation of the foot, and an elastic bandage or stocking for support; and injection of an enzyme preparation intramuscularly, if indicated. If the condition is not controlled, should pulmonary infarction occur, or if the patient still has episodes of recurrence, then the advisability of surgery should be considered, the veins in the thigh being exposed for ligation and resection.

GLUCOSE-TOLERANCE TEST AFTER GASTRECTOMY

To the Editor:—*A 28-year-old man had a fasting blood sugar level of 103 mg. per 100 cc. A glucose-tolerance test made later in March, 1957, was as follows:*

Time, a. m.	*Sugar in Blood, Mg./100 Cc.*	*Urine*
8 (fasting)	*107*	*None*
8:35	*224*	*Faint trace*
9:05	*325*	*3.3%*
10:05	*157*	*1.0%*
11:05	*58*	*None*

There is a history of duodenal ulcer for the past 10 years, of gastrectomy in 1953, and of acute pancreatitis two years prior to writing. Is this condition diabetes mellitus, or can it be due to chronic pancreatitis? In the question of treatment, is a high-protein, fat, and restricted sugar diet indicated for each meal? Should further diagnostic procedures be carried out?

Norman Schaefer, M.D., Bronx, N. Y.

This inquiry has been referred to two consultants, whose respective replies follow.—Ed.

Answer.—This abnormal glucose-tolerance test might well be due to the previous gastrectomy, with rapid emptying of the stomach and accelerated absorption of glucose from the small intestine. It would be advisable to perform an intravenous glucose-tolerance test in order to eliminate the factor of absorption. One-third gram of glucose per kilogram of standard body weight is injected as a 50% solution intravenously over a period of two minutes. Specimens for testing are taken from the opposite arm. In normal individuals, the blood sugar level returns to normal in 60 to 90 minutes. If the intravenous test should prove to be abnormal in this case, it would probably mean diabetes mellitus, but the test would not distinguish between spontaneous diabetes and that due to pancreatitis. If the intravenous glucose-tolerance test should reveal diabetes, restriction of dietary carbohydrate would be indicated, provided that examination of the feces did not show defective absorption of fat and protein, which might come about as a result of pancreatic deficiency. If such deficiency were found to exist, the restriction of carbohydrate would have to be modified so as not to present the intestine with excessive amounts of protein and fat.

Answer.—Interpretation of such a glucose-tolerance curve as is presented in this query is made difficult by the history of gastrectomy and acute pancreatitis. It is well known that, in some patients, with or without the dumping syndrome, after gastrectomy, the blood sugar level may rise rapidly after the taking of glucose to a point above normal and then return to normal or even subnormal levels at the end of two hours. This has usually been interpreted as due to the rapid absorption of glucose because of the rapid delivery of glucose into the duodenum and a corresponding stimulation of insulin production with the later hypoglycemia. It would be of value, therefore, in the patient

in question to carry out an intravenous glucose-tolerance test. Glucose is administered by vein at the rate of 0.5 Gm. per kilogram of body weight per one-half hour. It may be given as a 20% solution in sterile water or saline solution. The blood sugar level is determined in the fasting state and again at 30, 60, 90, 120, and 180 minutes. The blood sugar level should be returned to normal after 90 minutes. In a diabetic the blood sugar level would remain elevated.

The glucose-tolerance test, as given, may be interpreted as definitely abnormal, since the peak of the curve is far above normal and there is no return to the normal fasting level at the end of two hours. The fact that the blood sugar level at the end of three hours has reached 58 mg. per 100 cc. is of some interest. If the blood sugar level is a "true" glucose value, then 58 mg. is not surprisingly low. On the other hand, if the Folin-Wu method has been employed and the blood sugar level is not a "true" glucose value, then 58 mg. is definitely low. One wonders whether the patient has ever had symptoms suggesting hypoglycemia and whether the patient might have functional hypoglycemia. If this were proved, then a five-meal schedule might be needed.

If an intravenous glucose-tolerance test is confirmatory, the diagnosis of true diabetes mellitus is necessary, possibly on the basis of the preceding pancreatitis. Treatment with a planned diet is indicated. The total calories should be planned for the patient's age, weight, and activity. In general, a diet providing for carbohydrate (150-200 Gm.), protein (80-120 Gm.), and fat (70-100 Gm.) might be employed. In a patient 28 years of age, insulin should be used, unless the patient can be kept under constant observation and can be shown to be free from glycosuria and hyperglycemia on the dietary regimen.

TREATMENT OF CORNEAL DYSTROPHY

To the Editor:—*A patient, 61 years of age, has had corneal dystrophy in his left eye for three years, with progressive worsening of vision. Recently he was told that this condition was developing in his right eye. His work places a heavy load on his vision, and, in addition, he must do a considerable amount of automobile driving. What is the latest information on the treatment of corneal dystrophy?*

M.D., Pennsylvania.

This inquiry has been referred to two consultants, whose respective replies follow.—Ed.

Answer.—Dr. F. W. Stocker has reported the use of the inhibitor of carbonic anhydrase, acetazolamide (Diamox), for the endothelial type of corneal dystrophy of the Fuchs type, which this would seem to be. Relatively small amounts of acetazolamide are given over a long period of time, and a clearing of the media is claimed to occur indefinitely as long as the therapy is maintained. A second treatment, which has given good results in many cases, is the transplantation of the cornea. It is important that this transplantation be done as early as is feasible, so that the least amount of destruction of the corneal stroma will be permitted to occur. The latest histological studies show that corneal dystrophy is due to hypertrophic changes in the nerves in the original cornea, and it is quite possible that the steroids, such as prednisone, would help in clearing the opacities caused by the dystrophy. It must be remembered that one is dealing with a destructive lesion of the cornea of unknown etiology, and, therefore, much time must be allowed before any changes can be seen to take place.

Answer.—There are many types of corneal dystrophies, the medical treatment of which is invariably unsatisfactory. There is no known medical treatment that will alter the progress of the more commonly seen corneal dystrophies, such as the nodular dystrophy of Groenouw, the lattice-like dystrophy of Haab-Dimmer, or the spotted, familial type of dystrophy of Fleisher-Fehr. The treatment of choice for these dystrophies is surgical when vision becomes so impaired as to warrant a penetrating corneal transplant. Attempts have been made to treat primary lipid dystrophy medically but with questionable success. In this regard, roentgen irradiation of the cornea has been attempted to arrest the progress of the fatty lesion, and beta-irradiation has been effective in reducing the vascularization and arresting the secondary fatty infiltration. Surgical excision of the corneal nodules seen in Salzmann's nodular corneal dystrophy has been attempted with success by a lamellar or partial penetrating corneal excision with or without a transplant. Endothelial-epithelial dystrophies are usually not amenable to medical treatment and may ultimately require corneal transplantation with a graft large enough to take to healthy endothelium. Advanced epithelial dystrophy accompanied by severe pain has been relieved by a Denig graft with buccal mucous membrane. Resection of the greater superficial petrosal nerve to interrupt the efferent arc of the tearing reflex causes a permanent hypertonicity of the precorneal film by lessening the serous element of the tears. The precorneal film cannot become diluted by the excess of tears usually present in this condition. Deep roentgen therapy to the lacrimal gland has been advocated to alter the secretion of tears in patients unable to withstand surgery. The treatment of marginal dystrophy is usually directed toward correction of astigmatism. Cauterization or excision of the ectatic cornea, with reinforcement of the wound by a conjunctival flap, may be required in severe cases.

RHYTIDECTOMY

To the Editor:—*Is there an effective operation for face lifting so that the heaviness that appears just above and under the cheek bone will disappear? Is such a procedure difficult? Does the condition recur after surgery, and, if so, after about what interval of time?*

M.D., Illinois.

Answer.—Rhytidectomy, often referred to as face lifting, is a well-established, effective surgical procedure. When performed for removal of redundant skin of the face and neck, it produces very satisfactory improvement in the appearance but should be done conservatively to prevent a pulled expression to the face. It is a lengthy procedure, when done correctly, requiring three to four hours on the operating table. Since wide undermining of the skin is required, this operation should not be attempted by one who is not

thoroughly familiar with the anatomy of the face and neck or by one who is not thoroughly trained in plastic surgical procedures.

It is thought that relaxation of the skin during the aging period is due primarily to a loss of tone in the elastic fibers of the dermis, with the muscles of expression playing a secondary role. Although the gain from the surgery is permanent, it does not affect the aging process, and eventually the skin will again become redundant. The rapidity of the aging process in the skin varies greatly among individuals, and therefore some will achieve more lasting improvement than others. The operation may be repeated as often as indicated, the average interval of time being five to seven years.

X-RAY EXPOSURE AND POLYCYTHEMIA

To the Editor:—*A male x-ray technician, aged 31 years, has worked in a diagnostic x-ray department of a general hospital for 10 years. Usual safety precautions and intelligent supervision under radiologists have been in force, but film-badge service has only recently been started and results from this are not yet available. The technician has no complaints whatsoever, and physical examination by an internist indicates no abnormality. However, routine blood studies in 1954 and 1956 showed hemoglobin levels of 91% and 100% (16 Gm. per 100 cc.). The white blood cell count was 9,050 and 10,000 per cubic millimeter at these times. In March, 1957, the white blood cell count was 9,250 per cubic millimeter and the hemoglobin level was 109% (17.4 Gm. per 100 cc.). A repeat study a week later showed 10,750 white blood cells per cubic millimeter and identical hemoglobin level, with a hematocrit of 48%. Differential count showed eosinophils, 1%; stab forms, 7%; mature neutrophils, 54%; and lymphocytes, 38%. A week later in an internist's office where a freshly calibrated instrument was used, the hemoglobin level was reported as 16.35 Gm. per 100 cc. and the hematocrit as 42%. Should an early polycythemia vera be suspected with these findings? Are further studies indicated? Should the blood studies be done monthly for a period before attempting marrow study?*

Clarence P. Chrest, M.D., Kalamazoo, Mich.

Answer.—The data presented do not indicate that this patient has any evidence of polycythemia. The two hematocrit values are both within normal limits, as are the rest of the details of the patient's blood cell count. There is no evidence that x-ray exposure results in polycythemia vera. Patients with polycythemia vera may develop leukemia, and some workers in the field believe that exposure or treatment by irradiation will result in a higher incidence of leukemia in patients with polycythemia vera than treatment by phlebotomies. However, there is no good proof of this view. Certainly in the case described there is no indication that this patient has polycythemia vera, and, moreover, as mentioned above, there is certainly no evidence that there is any relationship between irradiation and the occurrence of this disease.

MALATHION INTOXICATION

To the Editor:—*A 57-year-old woman has a peculiar mottling of both lungs and suffers from periodic respiratory infections which respond to penicillin. She has been a grower of African violets and has several hundred plants in her cellar on which she uses a toxic spray. Could the mottling of the lungs be due to inhaling this toxic substance whose generic name is malathion? Is there any record of toxic effects from constantly inhaling malathion in an enclosed space such as a cellar?*

J. Elmer O'Brien, M.D., Erie, Pa.

Answer.—Malathion is an organic phosphorus insecticide used in the control of certain pests of fruits, vegetables, and ornamentals. As a public health pesticide, it has been employed for the control of house flies and as a mosquito larvicide. The usual cholinergic signs and symptoms are characteristic of malathion intoxication. In addition, acute muscle weakness has been noted in chickens given large subcutaneous doses of the compound. A detailed discussion of this syndrome is given by Durham, Gaines, and Hayes. (*A. M. A. Arch. Indust. Health* **13**:326-330 [April] 1956). The toxicity of malathion to experimental animals is low as compared with that of many other organic phosphorus insecticides. Based on studies with experimental animals, both the acute oral and the dermal toxicities of malathion are less than those of DDT. No established cases of human poisoning from malathion are known that parallel the circumstances described in the query. No information is available that mottling of the lungs has been associated with inhalation of this or related materials.

FISSURING OF NAILS

To the Editor:—*Please give advice regarding fissuring and splintering of the nails. Is gelatin or tincture of white iodine of any value?*

Sidney Schreider, M.D., Berwyn, Ill.

Answer.—Fissuring and splintering of the nails is sometimes a syndrome per se; other times it is related to various skin diseases and to contacts. In the last-named instance it is most essential to eliminate any contacts responsible for keeping the nails in this condition. The syndrome per se sometimes occurs in psoriasis. In cases in which the physical examination was negative (and no doubt the findings of the blood chemistries [uric acid] were normal), gelatin has been used by a number of observers. The latest such report by Rosenberg and Oster indicates that 26 out of 36 patients improved very strikingly. Five cases were definitely associated with psoriasis. Gelatin, of course, is an extract of beef and contains amino acids and a goodly percentage of glycine which is capable of increasing peripheral temperature. The results from the use of gelatin have not been uniform among observers. Yet in some cases it has definitely been of help, although it has not altered the primary condition, such as psoriasis. Tincture of white iodine has also been used by lay people, but from the scientific point of view it is of no particular merit, having very feeble bacteriostatic and fungistatic properties.

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1. Martin, G. A., Garfinkel, B. T., Brooke, M. M., Weinstein, P. P., and Frye, W. W.: *J.A.M.A.*, 151:1055, Mar. 28, 1953.

2. Kohn, J.: *Jour. Trop. Med.*, 53:212, Nov., 1950.

3. Information Please: *GP*, 4:91, Sept., 1951.

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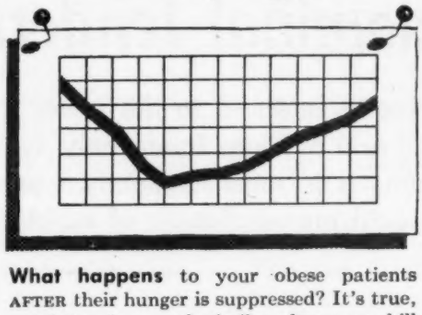

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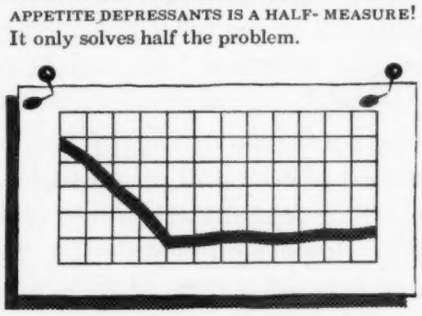

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FOR PERSONAL CLASSIFIED ADVERTISEMENTS set in bold type (like this paragraph) the rate is $11.25 per insertion for 30 words or less, additional words 30c each.

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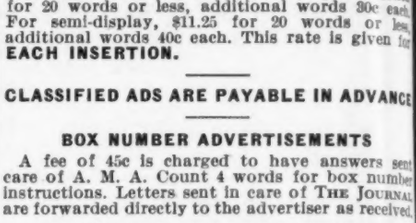


All replies to key numbers are mailed the same days as received.

Physicians who are not members of county medical societies should submit professional references with their advertisements and thus avoid delay.

The right is reserved to reject or modify all advertising copy in conformity with the rules of the Advertising Committee.

All questionable items will be excluded from these columns and notification of any misrepresentation seen by readers will be appreciated.

CLASSIFIED ADVERTISING FORMS CLOSE FRIDAY NOON 15 DAYS PRIOR TO THE DATE OF ISSUE

Journal A.M.A., 535 N. Dearborn St., Chicago 10

NOTICE

PROPOSED MEDICAL BUILDING—AVAILABLE FOR two, three or four physicians, depending on space required; will build to suit; adequate private parking facilities. For additional information write: Quinn Home Builders, Inc., 8046 South Western Avenue, Chicago 20, Illinois or call Prospect 6-3900.

ASSISTANTS WANTED

WANTED—OBSTETRICIAN-GYNECOLOGIST; BOARD Eligible candidate as an associate; income supplemented if needed to help get started. Contact Box 531, El Centro, California. B

WANTED — ASSISTANT ADMINISTRATOR (MD REquired); supervision and direction of professional services excluding nursing; direction of intern and resident program; experience in general hospital administration an asset; age 30-35 preferred; please state education; experience and salary desired. Apply: Mr. Alex Smith, Acting Administrator, The Queen's Hospital*+, Box 614, Honolulu, Hawaii. B

WANTED — ASSISTANT IN GENERAL PRACTICE, Illinois city of 5,000 population with near-by approved hospital; X-ray and full time lab facilities available; salary first year $12,000, second year percentage and eventually partnership if desirable; professional and personal data requested in reply. Box 4524 B, % AMA.

NEBRASKA—GENERAL PRACTICE; SALARY $10,000 first year, percentage and partnership later; growing community mostly office and hospital; pleasant living conditions. Reply fully: Box 4535 B, % AMA.

NURSES WANTED

REGISTERED NURSES—POSITIONS AVAILABLE AT the Community Hospital, Lanai, Hawaii; commencing salary $305; nurses quarters nearby. For details apply to: The Administrator, Lanai Community Hospital.

PHYSICIANS WANTED

WANTED—PHYSICIAN TO ASSOCIATE WITH established physician in caring for employees, their families and private patients; includes general practice, obstetrics, anesthesia, surgery and industrial work in well-equipped clinic and small hospital owned and operated by largest nonferrous metal producing company in world, which is currently also largest uranium ore producer in U. S.; located ten miles from fast growing community in Southwest; having healthful, very temperate, but at time windy climate; at elevation 6,600 feet; automobile furnished for use on company or professional business; modern furnished house near clinic available rent free; bus service to public schools; good salary plus generous participation in clinic gross income. Write to: Personnel Department, The Anaconda Company, Box 638, Grants, New Mexico, giving outline of qualifications and experience. C

SHAY MEDICAL AGENCY

55 E. Washington Street
Chicago 2, Illinois
Service of Distinction since 1914

ANATOMIC PATHOLOGIST: Assn, priv. lab; $1000 a mo. 1st yr; then prtnrshp; Tex.

ANESTHESIOLOGIST: $11,000; 650 bed. med. hosp; attractive east Tex. city in heart of wealthy area.

COUNTY PHYSICIAN: to provide med. aid for persons unable to do so for themselves; fee schedule basis; 2 excel. hosp. avail; western slope of Rocky Mnts; little rural travel.

ENT: 16 man group; Ill.; finan. arrange. open; can make $21,000 1st yr.

GENERAL PRACTICE: (a) w/trng. in surg; well-est. & active assn. in southern Calif; sal. open. (b) assn. w/2 yrs. surg. trng; excel opptny to earn lge income immed; Fla. (c) w/ob-gyn; Mich. clin; to $12,000 w/chance for advnemnt.

INDUSTRIAL: well known MW company-operated disp. w/finest equip; steady 40-hr week; sal. open.

INTERNAL MEDICINE: (a) med. grp. in growing comm. of N. J.; opptny. to net $15-$20,000 2nd yr. (b) w/ geriatrics & phys. med.; reg. hrs.; Fla. hosp.

OBSTETRICS-GYNECOLOGY: 13 man diversified grp; Ky; $18,000 w/prtnrshp at end of 1st yr.

OPHTHALMOLOGIST: (a) asst. Cert. man; Atlanta; our client says he has much to offer right person in well est. & rapidly growing pract. (b) to be 2nd in dept. of well-known lge. grp. est. 30 yrs. ago; head of dept. born in '16 & Cert. in Eye; delightful western city of 50,000.

ORTHOPEDIC SURGEON: (a) to join prtnrshp of 15 specialists, all Bo'd Cert. or elig; beaut. historic MW city; sal. start. (b) guar. $1500 a mo; Tex. Found. of 6 Bo'd or elig phys; nearest competition is 45 miles away.

PATHOLOGIST: int. in tchng. & resrch; Univ. Med. Center; routine duties at minimum.

PEDIATRICIAN: (a) assn. w/yng man specializing in surg; Ill. city of 20,000; $1000 1st 6 mos. w/% thereafter; full prtnrshp in 3rd yrs; (b) 8-man grp. nr. Mayo's & U-Minn; $12,000 1st yr.; future prtnrshp; can net $25,000.

PHYSICIANS: (a) w/genuine interest in biologics & blood work; exp. not nec.; trng. offered; Chgo. resrch. found.; $10,000 start; (b) Ob, Ped, some genl; $12,000 w/rapid advancement; west Tex. grp. of 4 in progressive comm.

PSYCHIATRIST: clin. dir.; nr. Chgo.; to $19,000; opptny. for other outlets incld. priv. pract; inst. work, resrch; 40 hr. week.

RESIDENT PHYSICIAN: MW state prison w/pop. of 1100 adult males; sal. & home provided; well equip. hosp. avail; area offers recreational & cultural opportunities; Phys. can develop excel. med. serv. & create good working relationship w/nearby Med. Schl.

STAFF PHYSICIAN: Pleasant work in TB & related chest diseases; trng. in gen. med. acceptable; new hosp. nr. San Francisco; to $906 a mo.

SURGEON: w/some genl. pract.; 2nd yr. should net $15,000; new clin. & hosp. facil. avail.; nr. Louisville.

TUBERCULOSIS: supervise TB annex of southern charity hosp; requires active well qual. phys.; $920; new brick 3 bedrm. home completely furnished w/central htng. & air-conditioning.

UROLOGIST: assn. offices & hosp. pract.; % basis leading to full prtnrshp.; NY comm. increasing in activity & prosperity.

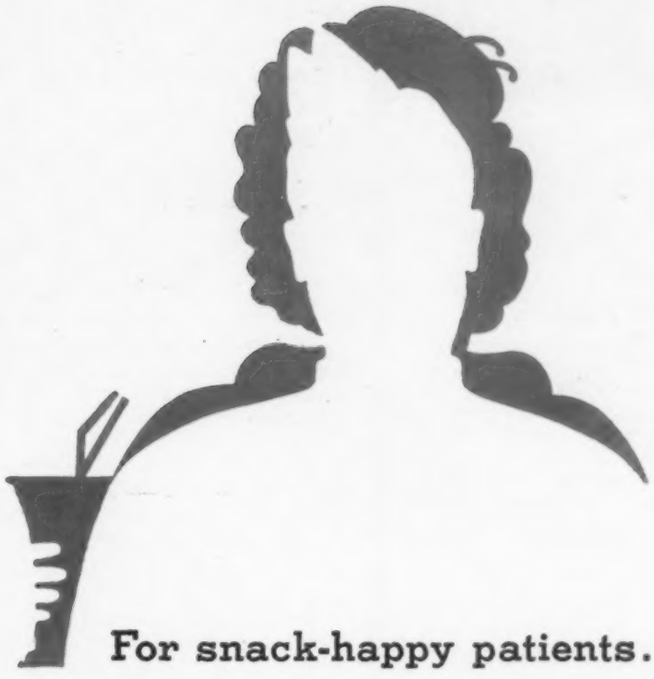
Upon request one of our applications will be mailed to you. Write us today—a post card will do.

THE VETERANS ADMINISTRATION HOSPITAL, Brooklyn, New York, a general hospital of 1000 beds and affiliated with the State University of New York, College of Medicine at New York City, has the following full time staff openings for certified or board-eligible physicians; exceptional research opportunity; generous vacation; sick leave; pension and life insurance provisions: UROLOGIST—as Chief of Service; 40 active beds; approximately 470 operations per year; three residents; salary range $8990 to $13,760 per annum. OTOLARYNGOLOGIST—as Chief of Service; 12 active beds; salary range $8990 to $13,760 per annum; PSYCHIATRIST—for staff appointment; 120 active beds; five residents; salary range $8990 to $13,760 per annum. Write or wire to: Manager, Veterans Administration Hospital, Brooklyn 9, New York. C

PSYCHIATRY — OPENING FOR STAFF PSYCHIAtrist; at Veterans Administration Hospital,+ Hines, Illinois; 110 bed psychiatric unit in large general hospital; staff psychiatrist has extensive opportunities for teaching, supervision of residents, performing therapy, and research; personal analysis available in adjacent Chicago; our highly active and diversified inpatient program includes psychotherapy (individual and group), somatic therapies and therapeutic activities program (occupational, educational, corrective and manual arts therapies); salary range $8990 to $12,000 (plus 25% for certification); 30 days' vacation yearly; 15 days sick leave yearly; U. S. citizenship required. Write: Louis Jensen, MD, Chief, Psychiatry Service, Veterans Administration Hospital, Hines, Illinois. C

WESTERN MARYLAND—RURAL AREA URGENTLY needing general practitioner, July 1958; physician leaving to specialize; fully equipped office and house for sale; would share office beginning immediately; or would welcome association until July 1958; excellent opportunity for general practitioner also wishing to do general surgery, or internist, or pediatrician; willing to do general practice along with specialty; affiliation in open staff; full accredited community hospital. Box 4568 C, % AMA.

POSITIONS AVAILABLE—1005 BED G.M.&S. VETERans Administration Hospital+ affiliated with Albany Medical College; applications invited for Radiologists, Neurologist, Internist; General Practitioners; Board Certification not necessary; U. S. citizenship and licensure in any state of union necessary; salaries $8990 to $13,760 depending on qualifications and board certification; bachelor quarters available for reasonable remuneration. Address inquiries to: Director, Professional Services, V. A. Hospital, Albany, New York. C



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Rx **BIPHETAMINE®** RESIN

APPETITE CONTROL for 10-14 hours, due to 'Strasionic'—sustained ionic—release.

PATIENT APPRECIATION one capsule once-a-day.

PREDICTABLE WEIGHT LOSS Rx Biphetamine capsules containing a mixture of equal parts of amphetamine and dextro amphetamine in the form of a resin complex. Three strengths—Biphetamine 20 mg., 12½ mg., 7½ mg.

For Literature and Samples, Write **Strasenburgh** FOUNDED 1886
Rochester, N. Y.

WANTED — GENERAL PHYSICIANS; UNDER 35 years of age; full time hospital practice; opportunity to develop special interest; consultation with specialists available in professional care program of 10 Miners Memorial Hospitals; full time positions with starting compensation at the rate of $12,000 per year; progressive pay scale; U. S. citizenship and eligibility for licensure in Kentucky, Virginia or West Virginia required. For details, Address: The Clinical Director, Miners Memorial Hospital Association, 1427 Eye Street, N. W., Washington 5, D. C. C

PHYSICIAN WANTED — MENTAL HOSPITAL; 1400 patients; located in central Massachusetts; good living quarters, for family or single person; group insurance; coverage for hospitalization, medical services, accidental disability, etc.; paid vacations; sick time allowance; starting salary $9594 yearly, plus yearly increases. Apply to: Warren P. Gordes, MD, Superintendent, Gardner State Hospital, Box 488, Gardner, Massachusetts. C

ASSISTANT MEDICAL DIRECTOR — INSURANCE company upper midwest; training in internal medicine required; age under 40; fringe benefits and excellent working conditions; work consists of underwriting; interpreting x-rays and electrocardiograms, industrial medicine, and some administration; starting salary based on qualifications; submit background information, professional and personal to: Box 4579 C, % AMA.

WANTED—RESIDENT SURGEON, JANUARY 1ST; 180 bed hospital; mid-Appalachian State; give all schooling, training and personal details first letter; $500 monthly. Box 4569 C, % AMA.

BOARD CERTIFIED OR BOARD ELIGIBLE STAFF physician in general surgery — for new, completely equipped 250 bed general hospital in West Texas, pleasant climate all year round, excellent retirement plan; life insurance, annual leave; sick leave and other benefits; salary $8990 to $13,760, depending on qualifications. Apply: Personnel Officer, Veterans Administration Hospital, Big Spring, Texas. C

GENERAL PRACTITIONER WITH INTERESTS IN surgery—for new completely equipped 250 bed general hospital in West Texas; pleasant working conditions; dry, mild, pleasant climate; excellent retirement plan, life insurance, annual leave; sick leave and other benefits; salary up to $11,610. Apply: Personnel Officer, Veterans Administration Hospital, Big Spring, Texas. C

VACANCIES FOR SEVERAL FULL-TIME PSYCHIAtrists at Veterans Administration Hospital, Lebanon, Pennsylvania; located twenty-eight miles east of Harrisburg; will consider physicians without psychiatric training if interested in psychiatry; opportunity available for career-residency training in psychiatry. Write: Manager, Veterans Administration Hospital, Lebanon, Pennsylvania. C

GENERAL PRACTITIONER—FOR PERMANENT ASsociation with general practice group in northwest Chicago; regular hours; pleasant working conditions; unusual opportunity. Write: 7800 W. Higgins Road, Chicago 31, Illinois. C

(Continued on page 77)

LIPPINCOTT

a physician's manual . . .

SEXUAL HYGIENE AND PATHOLOGY

by John F. Oliven, M.D.

An authoritative manual for the physician. Reviews all normal aspects of sexuality; covers all sexual disorders and distress states encountered in medical practice. Includes valuable advice on marriage counseling and the sex education of children.

On a professional level throughout, "Sexual Hygiene and Pathology" is organized in four parts: "Sexuality in Childhood," "Sexuality in the Second Decade," "Sexuality of the Normal Adult" and "Sexual Pathology."

"The book is an admirable presentation of a most difficult subject... It discusses objectively the various aspects of sex, the normal as well as the pathologic, clearly, concisely, and yet thoroughly."
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"The book is unique in its scope and contents. It is highly recommended."
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481 Pages 1st Edition, 1955
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In Canada—4865 Western Avenue, Montreal 6, P.Q.

Please enter my order and send me:

☐ SEXUAL HYGIENE AND PATHOLOGY.....$10.00

NAME.....
ADDRESS.....
CITY.....ZONE.....STATE.....
☐ Charge ☐ Payment Enclosed
☐ Convenient Monthly Payments
JAMA—8-17-57

LIPPINCOTT

TONICS AND SEDATIVES

♠

my favorite story

In this space will be published anecdotes submitted by physicians concerning their practice or people in general. Contributions for "My Favorite Story" are welcome.

♠

An enterprising reporter once asked Mr. and Mrs. John D. Rockefeller Jr. whether they had difficulty in bringing up their children without spoiling them in view of their great wealth.

The reporter wondered how they could deny their children anything even when they knew that what the children wanted might not be good for them.

Rockefeller's answer was very simple. "Whenever such a situation arose, we merely asked the children, 'Who do you think we are, the John Jacob Astors?' "

♠

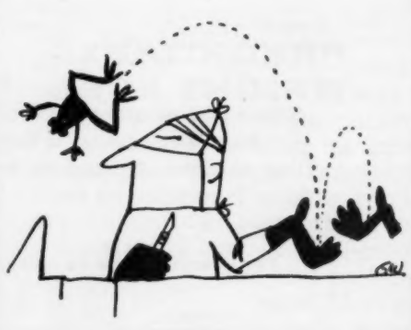
Since so many doctors have sent us this story we feel the urge to reprint it here even though it is an oft told tale.

This tale concerns a large bank in New York City that sent flowers to the management of an upstate city bank giving congratulations on the opening of its new facilities.

However, through a mistake on the part of the florist, the card with the flowers read "Deepest Sympathy."

Later the florist called the New York City bank to apologize for the mistake. The florist said, what really worried him, however, was that the other bouquet, intended for a funeral, carried a message that read, "Congratulations on your new location."

♠



♠

quotes and quips

Overheard in a department store: A mother examining a toy said, "Isn't this rather complicated for a small child?"

The answer: "This is an educational toy, Madam, designed to help children adjust to the world today. Any way they put it together is wrong."

♠

The father was playing possum while his youngsters tried their best to awaken him from his Sunday afternoon nap and take them for a promised walk.

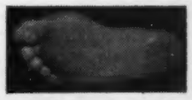
Finally, his 5-year-old daughter pried open one of his eyelids, peered carefully and reported, "He's still in there."

(Continued on page 74)

PERFORMANCE WITH

GREATER PERMANENCE IN SUBACUTE AND CHRONIC DERMATOSES

(REGARDLESS OF PREVIOUS REFRACTORINESS)



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CREAM

Hydrocortisone and Special Coal Tar Extract (TARBONIS®)

Topical hydrocortisone alone or other steroids alone often produce dramatic but temporary results.[1-3] TARCORTIN, however, adds greater permanence to initial success.[2-3] The broader and more enduring results with TARCORTIN derive from the potentiating effect of its components — tar and hydrocortisone.

Package: 7 gram and 1 ounce tubes.

Formula: 0.5% Hydrocortisone in 5.0% Special Coal Tar Extract (TARBONIS) in a Greaseless, Stainless, Hydrophilic, Vanishing Cream.

Indicated where infection is present or anticipated and for dry, scaly eczemas!

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Neo-Tarcortin
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Hydrocortisone, Neomycin and Special Coal Tar Extract (TARBONIS)

Package: 7 gram and 1 ounce tubes.

Formula: 0.5% Hydrocortisone, 0.35% Neomycin (as Sulfate) and 5.0% Special Coal Tar Extract (TARBONIS).

References: (1.) Welsh, A. L., and Ede, M.: Ohio State M. J. 50:837 (Sept.) 1954. (2.) Clyman, S. G.: Postgrad. Med. (Mar.) 1957. (3.) Abrams, B. P., and Shaw, C.: Clin. Med. 3:839 (Sept.) 1956.

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relieves tension—mental and muscular

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IN THE UNITED STATES

from the Commission on Chronic Illness

PREVENTION OF CHRONIC ILLNESS

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In 1950 there were an estimated 28 million Americans suffering from chronic diseases and impairments. There is no reason to believe this number is decreasing, yet clinic and public health practices continue to lag behind in utilizing existing knowledge about prevention. How can the concept of prevention be instilled in students of medicine, nursing, social work, and related fields? What organizational patterns will be most effective for the administration of preventive programs? How can the public be moved to support preventive measures? This illuminating book provides a full discussion of these questions, as well as of the known preventive measures of major diseases and impairments. $6.00

CARE OF THE LONG-TERM PATIENT

Volume II

Here is a complete discussion of the problems of caring for the chronically ill: rehabilitation—at home and in the institution, training personnel, coordinating and integrating services, problems of research and of finance. This comprehensive study makes use of all available material in examining existing methods of providing care, and exploring and formulating new methods and principles. $8.50

To be published soon—

Volume III:
CHRONIC ILLNESS IN A RURAL AREA

The report of a study of the prevalence of chronic illness with estimates for care needed in a rural community.

Volume IV:
CHRONIC ILLNESS IN A LARGE CITY

A similar study in Baltimore, Md.

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Through Your Bookstore, or from
HARVARD UNIVERSITY PRESS
Cambridge 38 Massachusetts

TONICS AND SEDATIVES *(Continued)*

A small boy went to school for the first time and his teacher explained to him that if he wanted to go to the washroom he should raise two fingers.

The little boy asked, "How is that going to help?"

♠

A company of soldiers was transferred from the East to sunny California and arrived just in time for the rainy season.

The commander of the company, making a night tour of the camp, was challenged by a sentry standing at his post for two hours in a driving rain.

"Who goes there?" called the sentry.

"Friend," replied the commanding officer.

"Welcome to our mist," said the sentry.

♠

The teacher played "The Star Spangled Banner" and asked her class to identify it.

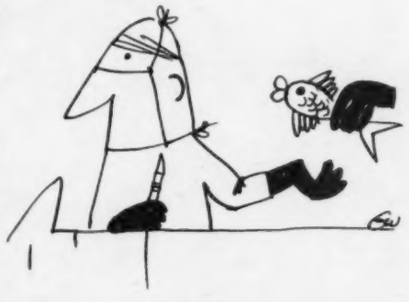
"That's easy," said a pupil. "That's what they play every Friday night on television just before the fights."

♠

A young man was driving along in traffic busily blowing his horn at every opportunity.

Finally, another driver pulled up along side with the perfect squelch. "Tell me," he inquired quietly. "What else did you get for Christmas."

♠



♠

An orchestral arranger who wanted to get together with a fellow musician wrote him the following note:

"Luncheon at the same place, key of G."

His friend was there at 1 sharp.

♠

A safety sign near a school read: "School —Don't Kill a Child."

Beneath this admonition was written in a childish scrawl, "Wait for a teacher."

♠

A little old lady handed the post office clerk a package containing a Bible.

"Anything breakable in this?" he inquired.

"Nothing except the Ten Commandments," the little lady replied.

♠

The children were having a free-for-all when Dad entered the room.

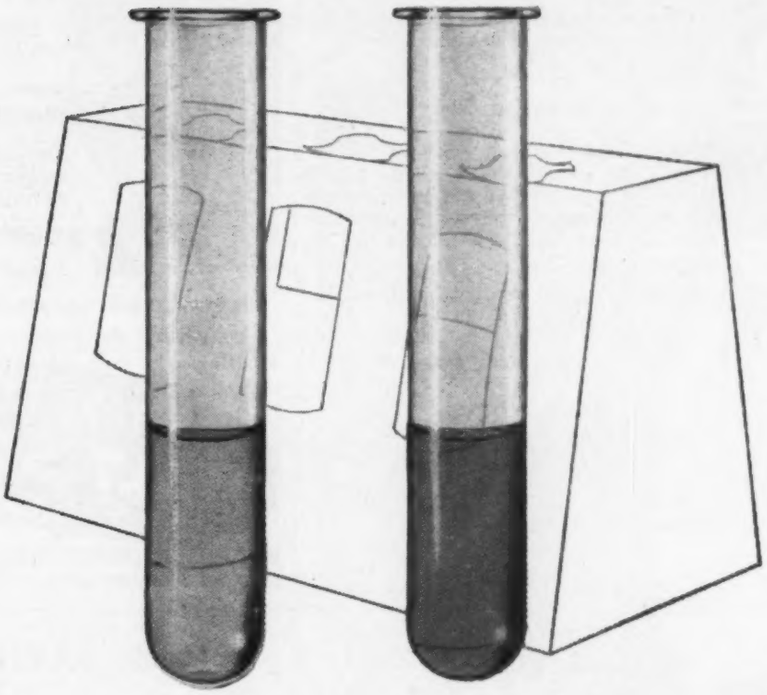
"Bill, who started this?" he asked.

"Well," replied Bill, "it all started when Frank hit me back."

(Continued on page 76)

NOW! without intubation

new accurate color test for gastric acidity...



DIAGNEX BLUE

Squibb Azure A Carbacrylic Resin Diagnostic Test

as simple as **A-B-C**

A. The patient takes DIAGNEX BLUE.

B. Urine samples are returned to the physician.

C. Simple color comparison denotes gastric acidity.

No special equipment needed.

qualitative accuracy—without intubation

SQUIBB Squibb Quality—the Priceless Ingredient

DIAGNEX® IS A SQUIBB TRADEMARK

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Eczema
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℞ soothing
AVEENO*
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*AVEENO® Colloidal Oatmeal is available in 18 oz. and 4 lb. boxes.
send for samples
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250 West 57th Street New York 19, N. Y.
Distributors E. Fougera & Co., Inc.

TONICS AND SEDATIVES *(Continued)*

poetry corner

Let me consign to utter ruin
The lad who asks me how I'm doin'.

♠

We men have many faults.
Poor women have but two.
There's nothing good they say
And nothing right they do.

♠

They call it legal tender,
That green and lovely stuff.
It's tender when you have it,
But when you don't it's tough.

♠

more on malapropisms

In one of our previous columns we discussed some of the more famous sayings attributed to Samuel Goldwyn. This week we pay homage to the distaff side. Jane Ace has been famous for years for her quips on radio.

"Everything she says is so topsy-eva."

♠

"I can explain it in words of one cylinder."

♠

"I was sound awake all night."

♠

"It was like looking for a needle on a hayride."

♠

"There's no use crying over spoiled milk."

♠

"In a pig's sty they would."

♠

"Well, I've got that one out of my cistern."

♠

"Once I get started on a thing, I am completely uninhabited."

—D. D.

for
CONSTIPATED
BABIES
AND CHILDREN
• Softens hard, dry stools naturally
• Promotes favorable intestinal flora
• Effective... non-habit forming
• 45 years' clinical use
Dose: 1 or 2 Tbs. daily in formula or milk.
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Extract*
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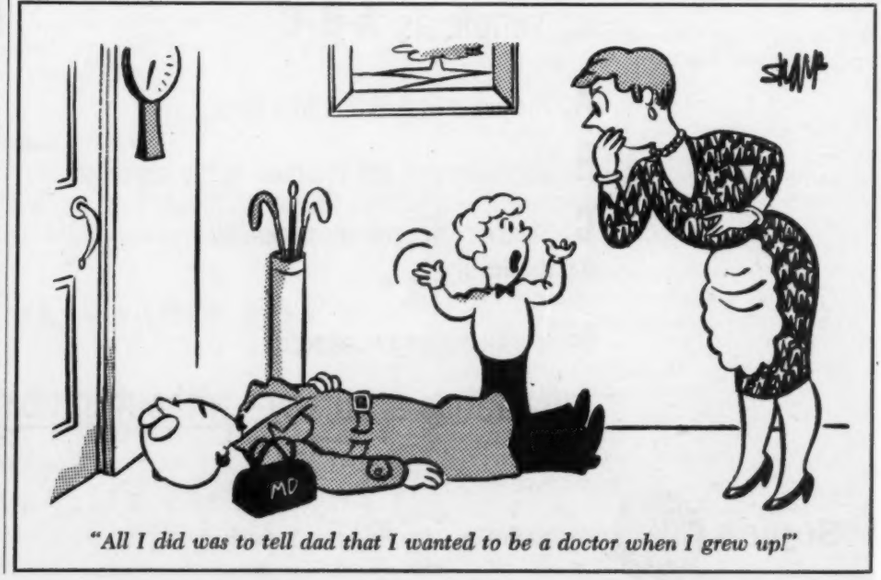

"All I did was to tell dad that I wanted to be a doctor when I grew up!"

(Continued from page 71)

The Medical Bureau

900 North Michigan Avenue Chicago

ADMINISTRATION: (AA49) Ass't med. dir., 450 bed gen. hosp; duties include dir. res. prog; outside US; delightful climate.

ANESTHESIOLOGY: (B76) Two Board men to take over dept, 350 bed gen. hosp; increasing to 500 within 2 yrs; each should average $20-$25,000; MW.

ASSISTANTS: (C81) By 2 Board surgeons, on fac. med. school; surg training not necess; MW. (C82) By prominent surg; duties: assisting in surg. in hosp., office, making rounds in hosp. afternoons; $12,000; coll. town, Tex.

DERMATOLOGY: (D89) Head dept, 20 man group estab. '21; univ. city, SW.

GENERAL PRACTICE: (F76) Ass'n, 2 well estab. GPs; average patients per day, 50; office & tech. staff of 7; med. school city, Co; partner oppor. (F77) Ass'n, well estab. GP; pref. one with better than averabe training in surg; oppor. full partner; town 30,000, drawinb area 60,000, Calif. (F78) Ass'n, GP; well balanced practice with surg & OB privileges, 3 hosps; pref. one with yr. or 2 res. in gen. pract, surg, OB, med or ped; city 200,000 Mich; $12-$14,000, 1st yr; early partner. (F79) Ass'n 2 GPs, well estab. farming community, 10,000; near NYC; 4 weeks' vacation annually; partner after 2d yr. (F80) Woman GP; foreign operations, major co; $18,000 tax free.

INDUSTRIAL MEDICINE: (G5) Chief phy; plant now under construction; start with 3000 employes; Dipl. Board Preventive Med. or elig. pref; So. (G6) Med. dir; 1000 employes; complete facilities, staff of 5; Wis; $12-$15,000.

INSURANCE MEDICINE: (I80) Ass't med. dir; major co; N. Eng.

INTERNAL MEDICINE: (H99) Ass'n, group of 5 internists; busy practice with study & research in arthritis; univ. city, SW. (H1) Ass'n, major indus. co; duties: pract. of int. med; preventive, health mtce prog; NYC. (H2) Ass'n, group limiting pract. to internal med; pref. men with subspecialty rheumatology, hematology or isotopes; Florida. (H3) Chiefs depts. new gen. hosps & clinics serving lge indus. group; pref. trained G.I., hematology or pulmonary diseases; Boards pref; $20-$25,000; So.

NEUROSURGERY: (I57) Head dept, 30 man group; univ. city, SW.

OALR: (E50) Oph., also oto. qual. head depts, well estab. group; expansion prog; Florida. (E51) Oph. & oto., to serve as chiefs, clinic, 250 bed gen. hosp., foreign operations, major indus. co; substantial sal. (Fed. tax free); 2 yr contracts; renewable; 3 mo. vacation.

OBSTETRICS-GYNECOLOGY: (J88) Assoc. head, dept. 30 man group; pref. one qual. succeed head upon retirement end of '57; univ. town, 125,000; NW. (J89) Ass'n, 12 man group; coll. town, 90,000, Calif.

ORTHOPEDICS: (K38) Head dept, 4 man surgical group; new clinic bldg; yr-round resort town, near 3 univ. cities, SE. (K39) Ass'n, well estab. group serving area 175,000; hour's drive from San Francisco. (K40) Ass'n, 15 man group; univ. town, MW; $18-$20,000; oppor. succeeding chief upon retirement.

PATHOLOGY: (L56) Dir. dept. gen hosp. 300 beds; coll town. Chicago area; % netting $25-$35,000. (L57) Interested exper. patn., tch'g; ass't or assoc. prof; tchg hosp. & med. school; routine duties at min; So.

PEDIATRICS: (M59) Head dept, 10 man group; new 100 bed hosp., clinic bldg; rapidly growing area; distinctly healthful climate; Calif; $18,000. (M60) Head dept, 10 man group with no ped; entire med. staff on fee-for-service collected by central bus. office; town 35,000, drawing area 100,000; Appalachian hills, SE.

P & N: (P14) Young psy. to become permanent member, closed group of 34 Board men; 350 bed gen. hosp; res. town near 3 med. school cities, E. (P15) Ass'n, 800 bed gen. hosp; tch'g prog; staff of 130 full time Board men; oppor. practicing psy. on priv. pract. basis; one academically inclined req; med. school city, MW.

RADIOLOGY: (R40) Dir. dept, recently founded group; new clinic bldg designed for group pract; univ. city, Pac. NW. (R41) Ass'n. prominent rad., chief of depts, med school & affil. hosp; MW.

STUDENT HEALTH: (T93) Ass't dir, state univ; 10,000 students; W.

SURGERY: (U3) Group ass'n; now 2 Board surgeons; 3d greatly needed; Mich; $15,000. (U4) Ass'n, group of Board specialists; rapid y growing town, 60,000; full partner oppor; Tex. (U5) Hosp. & private pract; offices, equip. furnished; retiring surg. netted over $30,000; Alaska.

UROLOGY: (W83) Board qual; group ass'n; Pac. NW.

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RADIOLOGIST WANTED—900 BED GMS HOSPITAL affiliated with medical school; liberal vacation; sick leave; retirement and insurance plan; apartment on hospital grounds; beginning salary $9000 to $11,610 per annum depending on training and experience; with 25% for Board Certification. Apply to: Manager, VA Center, Martinsburg, West Virginia. C

CALIFORNIA — STAFF PHYSICIAN FOR PULMONARY disease service of 1600 bed teaching hospital*+ affiliated with the three medical schools in Los Angeles; excellent research facilities; pulmonary function laboratory; salary commensurate with qualifications. Write: Director, Professional Services, Veterans Administration Hospital, Long Beach 4, California. C

FAMILY PHYSICIANS — IMMEDIATE OPENINGS with Medical group, southwestern Pennsylvania; excellent educational opportunities; paid annual vacation and study period; net starting income $12,000 to $15,000 depending on training and experience. Write: Box 4574 C, % AMA.

WANTED—NEUROLOGIST; BOARD CERTIFIED OR qualified; for association with neurosurgeon; Buffalo, New York. Box 4581 C, % AMA.

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LARGE MIDDLE WESTERN PHARMACEUTICAL Manufacturer has position for well trained internist or pediatrician; creative medical writing and direct participation in clinical research; give full information, professional and personal; all replies confidential. Box 4376 C, % AMA.

PHYSIATRIST — YOUR INQUIRIES ARE INVITED concerning our need for a qualified physiatrist in rehabilitation service at Deaconess Hospital*+, 6150 Oakland Avenue, St. Louis 10, Missouri; new facilities. Write: Administrator. C

WANTED — ASSOCIATE IN GENERAL PRACTICE; growing college town northwest New Jersey; 50 miles from New York; state background of training, military obligations, salary requirements, etc.; good working conditions; good opportunity. Box 4491 C, % AMA.

INTERNIST—BOARD OR ELIGIBLE; CITIZENSHIP required; active 450 bed medical and surgical hospital; salary $8990 to $13,760, depending on qualifications. Contact: Manager, VA Center, Shreveport, Louisiana. C

INTERNIST — BOARD CERTIFIED OR ELIGIBLE; well established group 15 specialists located in excellent hospital; junior partnership after 2 years; good salary. Apply: Dr. John Schwab, Dept. Internal Medicine, Holzer Clinic, Gallipolis, Ohio. C

OPPORTUNITY FOR—INTERNIST; YOUNG; QUALIfied or certified; to associate with group in expanding area; northern mid-western states; unique organization; new fully accredited open staff; 120 bed hospital. Box 4426 C, % AMA.

WANTED—INTERNIST; 430 BED GENERAL MEDICAL and surgical hospital; supervised by Board Certified physician; bachelor quarters available on station. Write: Director Professional Services, VA Hospital, Fayetteville, North Carolina. C

GENERAL PRACTITIONER — WITH TWO YEARS post-graduate Generalist training to assist in covering active emergency service to large well known midwestern clinic; commencing salary $12,000 yearly. Director, The Lynn Clinic, Detroit, Michigan. C

EXCELLENT OPPORTUNITY AWAITS OTOLARYNgologist or EENT on basis of salary or percentage in association with Ophthalmologist; or independent practice in fastest growing community in Florida. Write: Box 4578 C, % AMA.

(Continued on next page)

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ADMINISTRATION: (r) Direct 700 bd vol gen fully apprv'd tch'g hsp; newly created post; excellent offer; req's one affil'd ACHA; univ city; MW.
ANESTHESIOLOGY: (t) Assoc anes; 200 bd hosp add'g 150 bds; fee basis; Bay area; Calif. (u) Prtnshp private practice, anes; oppor $20-$30,000; So.
ASSISTANTS: (a) By yng GP; well est pract; $12,000; sm twn not far Chgo, Ill. (b) By surg; tremendous pract est '51; own ci bldg; near Seattle.
GENERAL PRACTICE: (a) Assn, well est GP emphasis ped; duties, gen prac; no Ob or surg; sal 1st yr, then equal prtnr net'g $20-$25,000; NYC suburb. (b) GP well qual surg; duties, clinical & direct sm hsp; $30,000; Alaska. (c) Serious, yng, well exp'd GP; train as med dir, brand new regional plant (5000 empl); major co; $15,000; nr Chgo. (d) Dir night serv; hsp clinic staffed by Board men; oppor specialize; $12,000; med sch city; MidE. (e) Two GP's, one int Ob & ped, other, anes; assn w/Board surg; found'g new clinic; twn 15,000; MidS. (f) Grp assn; GP & surg; indus & priv pract; twn 100,000; oppor build ips priv pract; Calif.
INDUSTRIAL MEDICINE: (r) Chief; pref cert OM; new plant; $18,000; SE. (s) Chief; new post; 5000 empl; $14-$16,000; E. (t) Med dir, new regional plant of major co with outstand'g med program; although plant opens Jan wish employ now; $15,000; nr Chgo. (u) Assn grp serv'g new 200 million plant; $15,000; MW.
INSURANCE MEDICINE (e) Train'd, internal med; career post; major insur co; MW.
INTERNAL MEDICINE: (l) Impor program, preventive med; home office, major co; career post; NYC. (m) One trn'd endocrinology or able do pulmonary function; assn, 12 Board men; $15,000; MW. (n) With TBc exper & admin ability; serve as med dir 100 bd Tb hosp; $10-$12,000, plus home; W. Mtn. (o) Assn w/Mayo trn'd, young internist; one with complimentary inter in metabolic diseases and diabetes; coll town; San Francisco area.
NEUROSURGERY: (f) Ass'n w/Board neurosurg; univ city; oppor teach; $18,000; Midwest.
OALR: (b) Oto; head dept, grp estab'd 8 yrs; 15 men; new clinic; So Calif. (c) Oto; head dept, grp, 8 Board men estab'd '35; will negotiate very satisfactory arrngmnt; Okla. (d) Oph; new post; head dept, 7 Board internists now expnd'g; city 100,000, noted area for wealthy retired; Fla.
OB-GYN: (d) Chief dept, new hosp & clinic serv'g indus group; if Board, $20-$25,000; So. (e) Assn, w/Board ob-gyn; gd sal, %, prtnshp; Calif.
ORTHOPEDICS: (x) Assn w/Board orthoped; 30 man grp long esta'd majority Diplomates; outstnd'g facil; So-Calif. (y) Head dept, 18 man grp mostly Dipls; $15-$25,000; oppor teach; research; MidE.
PATHOLOGY: (d) Dir dept, 600 bd fully apprv'd tch'g hsp; liberal %; recomm'd; MW. (e) Dir dept, 275 bd tch'g hosp; exc facil; $30,000 up; E.
PEDIATRICS: (w) Assn with Board ped; grp 16 men mostly Dipl's; coll twn 75,000 nr med schl; MW. (x) Head dept, 16 man grp mostly certified; excl coll city 165,000; new post; Pac NW. recom'd.
PHYSICAL MEDICINE: (v) Chief, dept, new hosp & clinic serv'g indus grp; if Board, $20-$25,000.
P & N: (s) Neurologist, trn'd in EGG and, too, psy, pref w/psychoanalytical exp; to head sections now combined; 70 man group; medical center; So.
RADIOLOGY: (w) Dir dept, 350 bd fully apprv'd tch'g hsp; nr NYC. (x) Dir dept, 150 bd vol gen hsp; expansion prog; nr med center; MW.
SURGERY: (u) Assn, Board surg; about $12,000; Colo. (v) Grp Assn; if Board $18,000; prtnr; MW.
UROLOGY: (l) Hd dept, 10 Diplomates expand'g to 20 men; oppor $20-$25,000; early prtner; Fla.

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(Continued from preceding page)

ORTHOPEDIC SURGEON — BOARD OR ELIGIBLE; for position of Chief of Section; active 450 bed medical and surgical hospital; salary $8990 to $13,760 depending on qualifications. Contact: Manager, VA Center, Shreveport, Louisiana. C

OPENING TEXAS PRISON SYSTEM — PHYSICIAN for general medicine and surgery; salary and maintenance; excellent opportunity for clinical and surgical experience. Contact: Dr. M. D. Hanson, Medical Director, P. O. Box 32, Huntsville, Texas. C

ABLE INTERNIST CERTIFIED OR BOARD ELIgible; association three man group; specialists; gastroenterology training desirable; academic, financial; personal satisfaction; excellent clinic facilities; Florida license; beautiful area. Box 4573 C, % AMA.

OPHTHALMOLOGIST — BOARD CERTIFIED; wanted by large group clinic in metropolitan medical center; South; must be capable of establishing and heading ophthalmology section. For further details, write: Box 4572 C, % AMA.

PEDIATRICIAN — FOR DEPARTMENT MIDWEST medical school; minimum 3 years of longitudinal research in developmental disorders of infants; salary $10,000; give curriculum vitae and references. Box 4585 C, % AMA.

ANESTHESIOLOGIST — IMMEDIATE OPENING IN newly formed group; central California; private practice; minimum salary first year $15,000; partnership arrangements thereafter; send details first letter. Box 4589 C, % AMA.

WANTED — GENERAL PRACTITIONER TO TAKE over suburban office in Minneapolis either as independent or associate; excellent practice established; nothing to buy; details first letter. Box 4591 C, % AMA.

PATHOLOGIST — UNDER 35, PREFERABLY JUST completed or completing residency; to associate with established pathologist; metropolitan Los Angeles. Box 4592 C, % AMA.

RADIOLOGIST—CERTIFIED OR ELIGIBLE; ASSOCIate in private practice, hospital and clinics in Milwaukee; excellent salary first year with partnership potential. Box 4580 C, % AMA.

WANTED — IMMEDIATELY; PHYSICIAN WITH surgical experience to associate with small group; small private hospital; south east; salary or fee basis. Box 4584 C, % AMA.

NEUROLOGIST—BOARD ELIGIBLE OR CERTIFIED—Wanted by large group clinic in metropolitan medical center, South. For further details write to: Box 4048 C, % AMA.

PSYCHIATRIST—BOARD ELIGIBLE OR CERTIFIED wanted by large group clinic in metropolitan medical center, south; for further details write to Box 4267 C, % AMA.

ANESTHESIOLOGIST—CERTIFIED OR ELIGIBLE; TO join diplomate in private practice on fee for service basis; first year's income better than $20,000; midwest. Box 4271 C, % AMA.

WANTED—SURGEON, MODERN FULLY ACCREDITed 100 bed hospital; salary to $12,900; attractive living quarters; must be citizen and have a state license. Manager, VA Hospital, Miles City, Montana.

WANTED—DOCTORS FOR FULL TIME EMPLOYment as ward physicians, for medical, surgical and neuropsychiatric services in recently constructed, modern VA neuropsychiatric hospital, Jefferson Barracks 23, Missouri, located 12 miles from downtown St. Louis; salary up to $12,685, depending upon qualifications; 25% additional salary up to $13,760 if Board certified; 30 days annual leave, liberal sick leave, insurance and retirement benefits; hospital affiliated in residency training program; applicants must be U.S. citizens, graduates of approved medical schools, and physically qualified; if interested, communicate with: Manager, V.A. Hospital+, Jefferson Barracks 23, Missouri. C

PSYCHIATRIST—MENTAL HOSPITAL IN VIRGINIA; Chief of Service, $10,992 to $12,582; four years of psychiatric experience, at least two years of which must have been in a mental hospital, state license or eligibility therefore, a graduate of medical school approved by the American Medical Association; vacation and sick leave with pay, retirement benefits, housing available. Box 4549 C, % AMA.

(Continued on page 80)

Introducing...
Two-dimensional treatment of the menopause

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MILTOWN® + CONJUGATED ESTROGENS (EQUINE)

"Milprem" *combines Miltown®* + *Conjugated Es*

ugated Estrogens (equine) for two-dimensional treatment of the menopause

The menopause is a two-dimensional problem...

Now for the first time, *both* manifestations of the menopause—psychologic and physiologic—can be comprehensively managed with *one* therapeutic agent: "*Milprem*".

In the past, many workers who have recommended estrogen replacement in the menopause have also noted the necessity of supplementary treatment for the symptoms of climacteric labile emotionality.[1-6] *Adams*,[5] for example, has referred specifically to "typical anxiety attacks," and *Donovan*,[6] generally, to the characteristic over-all "psychologic stress."

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The Need For Miltown: The psychologic manifestations of the menopause are effectively managed with Miltown. An impressive literature in recent years has confirmed Miltown's clinical value as a proven tranquilizer.

Selling: "The syndrome in which it [Miltown] is of most value is the so-called anxiety neurosis, especially when the primary symptom is tension."[7]

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The Need For Conjugated Estrogens (equine): It is now 15 years since "Milprem's" estrogen replacement component—conjugated estrogens (equine)—was reported by *Goodall* as successfully treating "the physical signs of the menopause . . ."[9] Since then a vast bibliography has accumulated.

Hamblen: "[A] natural estrogen of our choice."[10]

Shorr: "On the basis of cost, freedom from side effects or toxic effects and ease of administration"—an estrogen of choice.[11]

"Milprem"—MILTOWN® + CONJUGATED ESTROGENS (EQUINE)—is therefore rational and comprehensive menopausal therapy.

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"Milprem"

MILTOWN® + CONJUGATED ESTROGENS (EQUINE)

is two-dimensional menopausal therapy...

- **Because** it combines for complementary action Miltown® for emotional balance with Conjugated Estrogens (equine) for hormonal balance
- **Because** it replaces *half* control with *full* control
- **Because** *one* prescription manages *both* the psychic and somatic symptoms

Supplied: Bottles of 60 tablets.
Each tablet contains:

MILTOWN® (meprobamate, Wallace) ..... **400 mg.**
2-methyl-2-*n*-propyl-1,3-propanediol dicarbamate
U. S. Patent No. 2,724,720
Conjugated Estrogens (equine) ..... **0.4 mg.**
Licensed under U. S. Patent No. 2,429,398

Dosage: One tablet t.i.d. in 21-day courses with one week rest periods. Should be adjusted to individual requirements.

References:

1. McLaren, H. C.: The present status of hormone therapy at the menopause. Practitioner *171*:500, Nov. 1953. **2.** Sandes, S. G.: The management of the menopause. M. J. Australia *1*:274, Feb. 20, 1954. **3.** Peterson, P.: Management of the climacteric. Mil. Med. *116*:348, May 1955. **4.** Gold, H.: Management of the menopause, in Cornell Conferences on Therapy, vol. 4, edited by H. Gold, Macmillan, New York, 1951, pp. 301-321. **5.** Adams, R. D.: Disorders of nervous function, in Principles of Internal Medicine, edited by T. R. Harrison, McGraw-Hill, New York, 1954, pp. 227-233. **6.** Donovan, J. C.: Psychologic aspects of the menopause. Obst. & Gynec. *6*:379, Oct. 1955. **7.** Selling, L. S.: A clinical study of Miltown, a new tranquilizing agent. J. Clin. & Exper. Psychopath. *17*:7, March 1956. **8.** Borrus, J. C.: Study of effect of Miltown (2-methyl-2-n-propyl-1,3-propanediol dicarbamate) on psychiatric states. J.A.M.A. *157*:1596, April 30, 1955. **9.** Goodall, J. R.: Premarin in some post-menopausal complications. J. Obst. & Gynaec. Brit. Emp. *49*:660, Dec. 1942. **10.** Hamblen, E. C.: Irregularities of uterine bleeding and their treatment, in M. Clin. North America, edited by W. O. Thompson, Saunders, Philadelphia, Jan. 1948, pp. 57-72. **11.** Shorr, E.: Management of the menopause. Am. J. Med. *10*:91, Jan. 1951.

Additional selected references on request.

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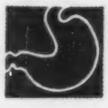

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FIG. 1

FIG. 2

FIG. 3

1. Expressly designed to assure your patient ease of insertion and automatic placement.
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When compressed, diaphragm forms into semi-curve or half-moon shape (Fig. 1) permitting it to pass easily along floor of the vagina beyond cervix (Fig. 2) without any difficulty. No mechanical inserter or introducer required (see Fig. 2) since the KORO-FLEX will not buckle or butterfly in form.

KORO-FLEX (contouring) Diaphragm acceptable, not only where ordinary coilspring diaphragms are indicated but for Flat rim (Mensinga) type as well.

May be used in cases of mild prolapse, cystocele or rectocele.

Suggest the convenient-economical KORO-FLEX COMPACT 60-95 mm
Sanitary plastic bag with zipper closure. Diaphragm, tube KOROMEX Jelly (3 oz.) Cream (1 oz. trial size).

Available in all prescription pharmacies. Write for descriptive literature.

Holland-Rantos Co., Inc. Manufacturers of **KOROMEX** Products, New York 13, N. Y.

(Continued from page 78)

EXAMINATION FOR PUBLIC HEALTH OFFICER—Competitive examination for health officer positions, local health districts in Illinois, will be held in Springfield August 26, 1957; open positions located Berwyn, Champaign-Urbana, East St. Louis; eligibles are physicians with citizenship, approved medical degree and rotating internship, full time public health experience, and Master of Public Health degree or equivalent experience; other public health physician openings available. Write: State Department of Public Health, 503 State Office Building, Springfield, Illinois. C

INDUSTRIAL MEDICINE—FULL TIME PHYSICIAN by one of nation's largest chemical companies; plant located in Kanawha Valley, West Virginia; modern facilities; ideal working conditions; excellent benefit program which includes savings and stock purchase plans; starting salary $10,000 to $12,000; 45 years of age or under; West Virginia license required; forward resume of training; experience and personal data to Box 4389 C, % AMA.

ASSISTANT THORACIC SURGEON — FOR GLENN Dale Hospital, the tuberculosis hospital for the District of Columbia; experience in thoracic surgery necessary; candidate shall have supervisory responsibilities of Assistant Chief, Dept. of Surgery; salary $10,065; sick leave, annual leave and retirement benefits; must be eligible for licensure in the Dist. of Columbia. Address inquiries to: Medical Director, Glenn Dale Hospital, Glenn Dale, Maryland. C

ASSISTANT CHIEF—SURGICAL SERVICE NEEDED in 500 bed GM&S hospital; teaching center affiliated with University of Colorado; must be capable of clinical; experimental research and teaching surgical residents; living conditions excellent; climate pleasant; high altitude and low humidity; Board certification highly desirable. Apply: Director Professional Services, Veterans Administration Hospital, Albuquerque, New Mexico. C

WANTED—STUDENT HEALTH SERVICE HAS VAcancy for male physician under 50 years of age; appointment effective September 1, 1957; salary $9,000 per year on 10 months employment basis, September 1 to June 30; appointment renewable annually if mutually satisfactory; applicant must be licensed to practice medicine and surgery in or be eligible by reciprocity with Oregon. Write: D. C. Reynolds, MD, Director, Student Health Service, Oregon State College, Corvallis, Oregon. C

VACANCIES—SENIOR PHYSICIANS WITH MINIMUM of 3 years psychiatric experience; excellent opportunities for advancement; salary range $7,320-$10,200 depending upon applicant's training and experience; annual increments; nominal deduction for complete family maintenance; fully approved large eastern mental hospital with 3 year accredited residence training progress; must be eligible for licensure in Connecticut. Box 4489 C, % AMA.

INTERNIST WANTED—IMMEDIATE OPENING FOR internist in well established clinic located in northern New England. Box 4503 C, % AMA.

REYNOLDS COUNTY, MISSOURI — POPULATI 8,000; in the heart of the Missouri Ozarks in the t of Ellington, population 1,000, has an opportunity opened for a young MD; hospitals nearby; 150 mile Memphis, Tennessee or St. Louis, Missouri; an opp tunity to establish yourself in a nice easy living co try; come and grow with us; co-operation guarant For further information address: H. E. Bowles, Ph macist, Ellington, Missouri.

RED BANK—PSYCHIATRISTS; CHILD, DIRECTO and assistant director; state operated; three director mental hygiene clinic, principally children; near N York; beaches close; good schools; choice residen area; eligibility for state licensure essential; starti salary $12,600, $11,400 and $9,600, five yearly incr ments to $15,600, $14,400 and $11,700; resume plea Write: J. Berkeley Gordon, MD, Medical Director, N State Hospital, Marlboro, New Jersey.

PUBLIC HEALTH PHYSICIANS — THE WEST VI ginia State Department of Health is recruiting for t medical vacancies; Deputy State Director—annual sa ary $12,000; Director, Division of Maternal and Chi Health—annual salary $11,500; must be licensed, eligible to secure license, to practice medicine in sta of West Virginia. For additional information writ N. H. Dyer, MD, MPH, State Director of Healt Charleston 5, West Virginia.

VACANCY FOR STAFF PHYSICIAN IN CHIL guidance clinic and A.A.P.C.C. approved trainin center; must be graduate of a recognized medica school with one year of rotating internship, three yea of approved training in psychiatry and a license eligibility for license in Virginia; 40 hour week, sala $10,500; private practice after hours and weekend permitted. Write: Director Children's Service Cente 1312 Lane Road, Charlottesville, Virginia.

WANTED—CHIEF PATHOLOGIST; 254 BED GENER al medical and surgical hospital; active laborator high autopsy rate and wide variety clinical and pathology material; excellent opportunity to teach in surgical and medical preceptor training program; hospita located at home of University of Arkansas, in th Ozarks. Contact: Personnel Officer, VA Hospital, Fay etteville, Arkansas.

POSITIONS STAFF PHYSICIANS—AVAILABLE IM mediately; Chief, Laboratory Service (Pathologist) general practitioner or internist; 570 bed general hos pital; VA Center, metropolitan Virginia area; Boar certification of pathologist desirable; citizenship an any state licensure required; salary, commensurate wit qualifications. Inquire: Manager, V. A. Center, Hamp ton (Kecoughtan), Virginia.

CALIFORNIA STATE ASSIGNMENTS FOR PHYSI cians and psychiatrists—Three salary groups: $11,40 $12,600; $12,000-$13,200; $13,200-$14,400; streamline employment procedures, interview only; U. S. citizen ship and possession of, or eligibility for California li cense required. Write: Medical Recruitment Unit, Bo F, State Personnel Board 801 Capitol Avenue, Sacra mento, California. C

PHYSICIAN WELL-QUALIFIED IN GENERAL MED ical care—for organization with overseas interests, U. S citizenship, graduate of class A medical school; start ing salary $10,000 plus allowances; initial 3 years con tractual; subsequent permanent affiliation dependent on qualifications; request reply provide summary personal and professional background to include military experience. Box 2800 C, % AMA.

OTOLARYNGOLOGIST — IN CALIFORNIA WITH fourteen man medical group; all specialists; near Sacramento; 85 miles from San Francisco; close to many out door sporting activities; certified or eligible; married; military service completed; salary basis first year; opportunity for early full partnership. Send complete detail to: John F. Hollister, MD, Woodland Clinic Medical Group, Woodland, California. C

DIRECT ACTIVITIES OF BIOLOGICAL CONTROL Department of large midwest ethical pharmaceutical manufacturer; MD degree required; in addition prefer Ph.D. or equivalent in biological science, should be under 40 years of age; excellent opportunity for ad vancement in administrative responsibilities; our em ployees know of this opening. Please send complete resume to Box 4561 C, % AMA.

PHYSICIAN — MALE; UNDER FIFTY; GENERAL practice experience preferred; class A graduate, full time position, University Health Service; some hygiene teaching; starting salary, $10,000 per year. Send personal qualifications and resume to: Dr. Glen W. Doolen, Director, Health Service, University of Illinois, 807 South Wright Street, Champaign, Illinois. C

FULL TIME INTERNIST FOR CLINICAL ASSIGNment to 480 bed, active medical teaching service; salary and academic appointment to medical school faculty determined by experience; excellent opportunities for clinical investigation and radioisotope research; citizenship required. Address: G. W. Bissell, MD, Chief, Medical Service, V. A. Hospital, Buffalo, New York. C

TWO SURGEONS—MINIMUM 2 YEARS RESIDENCY training, U. S. citizen, any state license; 150 bed general hospital; growing 27,000 city; good hunting, fishing area; $9,000-$14,000, depending upon qualifications; 30 day vacation, education, sick leave, retirement, life insurance; 3 bedroom house available. Director, Professional Services, VA Hospital, Minot, North Dakota. C

CHIEF RESIDENT PHYSICIAN IN INTERNAL MEDicine—To supervise house staff of 35 physicians; 684 bed county hospital*+ near New York City; unusual opportunity for clinical experience; salary $300 monthly plus complete maintenance and uniforms; available July 1, 1958. Apply Superintendent, Bergen Pines County Hospital, Paramus, New Jersey. C

WANTED — GENERALIST, YOUNG, TO ASSOCIATE with clinic of three members American Academy of General Practice in northern Minnesota; pleasant expanding community of 30,000; fully accredited 120 bed hospital; full associate after one year, no down payment, financial arrangements open. Box 4522 C, % AMA.

WANTED—A PHYSICIAN IN A TOWN OF 2,500 IN northwestern Pennsylvania; a good opportunity for a physician and surgeon; office for rent and office equipment for sale. Write or call: Mrs. C. B. Walker, Duke Center, Pennsylvania. C

(Continued on page 82)

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(Continued from page 80)

ASSISTANT MEDICAL DIRECTOR — FOR 100 BED county tuberculosis hospital with medical; surgical; out patient and investigative programs; furnished duplex apartment in addition to salary; appointee must acquire Minnesota license promptly. Address: E. V. Bridge, MD, Superintendent, Mineral Springs Sanatorium, Cannon Falls, Minnesota. C

PATHOLOGIST—CERTIFIED OR BOARD ELIGIBLE; to associate with young diplomate; busy hospital and private laboratory practice; technicians training school and approved residency; large prosperous, progressive midwestern city; $15,000 salary leading to partnership; give qualifications and details in first letter. Box 4472 C, % AMA.

WANTED — PHYSICIAN IN INTERNAL MEDICINE for 800 bed GM&S Veterans Administration Hospital located in the heart of Texas; salaries to $12,900 depending on experience and qualifications; quarters available on station grounds at low cost; excellent retirement and leave benefits. Apply: Dr. L. M. Cochran, Manager VA Hospital, Temple, Texas. C

WANTED—OBSTETRICIAN-GYNECOLOGIST; BOARD certified or eligible; to join established group in southwestern Pennsylvania; present staff of 45 Board specialists, located in modern well equipped clinic; yearly stipend of $16,000-$25,000 depending on qualification; annual vacation and study periods. Write: Box 4482 C, % AMA.

WANTED — COUNTY COMMUNITY HIGH SCHOOL town in north central Indiana (Miami county) needs doctor; exceptionally fertile farming area; within 11 miles of modern hospital; prepared to financially help young physician. If interested write: R. E. Johnson, Southern Miami County Community Association, Inc., Bunker Hill, Indiana. C

GENERAL AND INDUSTRIAL SURGEON—CAPABLE of handling all emergencies; must have Illinois license; single man preferred; willing to work evenings if necessary; good salary. Contact: Dr. M. S. Mazel, Edgewater Hospital, 5700 N. Ashland Avenue, Chicago 26, Illinois. C

RADIOLOGIST—CERTIFIED TO INCLUDE THERAPY and preferably isotopes; to associate with 320 bed hospital affiliated with a medical school; 2 full time radiologists and residents in the department; large city; eastern seaboard; state qualifications in first letter. Box 4423 C, % AMA.

WANTED—ORTHOPEDIST; BOARD CERTIFIED OR eligible; to join established group in southwestern Pennsylvania; present staff of 45 Board specialists, located in modern well equipped clinic; yearly stipend of $16,000-$25,000 depending on qualification; annual vacation and study periods. Write: Box 4483 C, % AMA.

INTERNIST WANTED—BOARD ELIGIBLE; NORTH Iowa town; 30,000 shopping center for rich farming and industrial area; association with internist and 2 surgeons; own building; excellent hospital facilities; $12,000 plus percentage first year; partnership 3 years. Box 4478 C, % AMA.

URGENTLY NEEDED — INDEPENDENT GENERAL practitioner in busy established practice; lucrative income; county seat; new hospital; office location; clientele of over thirty years; physician desiring to retire; wonderful opportunity for the right man; no investment required. Box 4486 C, % AMA.

WANTED — PHYSICIAN TO JOIN LONG ESTABlished group; central California; industrial medicine, surgery, and general practice; good salary leading to copartnership; give all information concerning self and training; when available, first letter. Box 4516 C, % AMA.

FAMILY PHYSICIANS — IMMEDIATE OPENINGS with medical group, southwestern Pennsylvania; excellent educational opportunities; paid annual vacation and study period; net starting income $12,000-$15,000 depending on training and experience. Write: Box 4485 C, % AMA.

INTERNIST, RADIOLOGIST AND UROLOGIST — Board certified or qualified; under 40; 17 man group well established; new building; north mid-west city 50,000; wonderful opportunity for willing worker; top salary; partnership in 3 years; give full details. Box 4505 C, % AMA.

WANTED—AMERICAN BOARD SPECIALISTS; PHYsicians interested in group or private practice, teaching, research, public health or industrial medicine; National and International services. Burneice Larson, Director, Medical Bureau, 900 N. Michigan Ave., Chicago. C

ASSOCIATE RADIOLOGIST—FULL TIME IN INDIana hospital*+ of 475 beds; new department and equipment, very active therapy section with KVP machines; isotope program to be established; salary leading to percentage; open September 1st. Box 4521 C, % AMA.

GENERAL PRACTITIONER — COMMUNITY, SIXTY miles from New York; individual practice or partnership with young physician; beautiful country; modern hospital; excellent schools, living conditions. Citizens Committee, W. Reading Gebhardt, Clinton, New Jersey. C

GENERAL PRACTITIONER—LOS ANGELES AREA; three man group; excellent working conditions; basic salary $12,000 annually, percentage when qualified; California license required. P. O. Box 2132, Inglewood, California. C

WANTED — GENERAL PRACTITIONER; SALARY $15,000 yearly, other benefits, partnership after 3 years; must be willing worker; must have Minnesota license; must have completed military obligation. Box 4530 C, % AMA.

OTOLARYNGOLOGIST WANTED—BOARD OR BOARD eligible to join clinic group of 19; attractive salary leading to partnership; unlimited potential; completely modern EENT department, Lake Michigan city of 45,000. Box 4435 C, % AMA.

WANTED—INTERNIST; CERTIFIED OR QUALIFIED; busy 354 bed GM&S Veterans Administration Hospital, Lake City, Florida; salary range $8990 to $12,685 plus 25% for certification; Florida license not required. Write: Manager above address. C

WANTED — NEUROSURGEON; BOARDS OR BOARD eligible; association with established neurosurgeon; must be energetic and able to help out in medical school teaching program; salary open. Box 4504 C, % AMA.

WANTED — CLINICAL PATHOLOGIST FOR LARGE, modern, western Canadian hospital; excellent area and working conditions; applicants apply to: Personnel Director, Calgary General Hospital, Calgary, Alberta, Canada. C

WANTED — ASSOCIATE IN GENERAL PRACTICE; excellent office, housing, schools, and hospital facilities; early partnership; 25 miles northwest of Minneapolis; salary $800 to $1,000 per month. R. D. Thielen, MD, St. Michael, Minnesota. C

WANTED—PATHOLOGIST; CERTIFIED OR QUALIfied; busy 354 bed GM&S Veterans Administration Hospital, Lake City, Florida; salary range $8990 to $12,685 plus 25% for certification; Florida license required. Write: Manager above address. C

CALIFORNIA MEDICAL BUREAU AGENCIES—FOR physicians placements and hospitals and medical properties for sale. 405 E. Green Street, Pasadena, California, and 610 S. Broadway Street, Los Angeles 14, California. C

ANESTHESIOLOGISTS—RECENTLY REORGANIZED group of anesthesiologists in private fee practice need the services of 2 Board or Board eligible anesthesiologists; early partnership available; midwest. Box 4452 C, % AMA.

HOUSE PHYSICIAN—FOR 80 BED GENERAL HOSPItal, 1 hour from New York City; mountain resort area; comfortable apartment; full maintenance plus $300 per month; no AMA approval. Apply: Administrator, The Cornwall Hospital, Cornwall, New York. C

ANESTHESIOLOGIST—PRIVATE PRACTICE; 80 BED hospital; choice opportunity for moderate sized growing practice; personal interview will be required. Send complete details to: P. O. Box 648, Santa Maria, California. C

ANESTHESIOLOGIST—BOARD OR QUALIFIED; Association small anesthesia group; fee for service; Michigan city of 80,000; teaching opportunity; give full details in first letter. Box 4480 C, % AMA.

WANTED — PHYSICIAN IN INTERNAL MEDICINE; ultra modern, fully-accredited 100 bed hospital; salary up to $12,900; attractive quarters available. Apply: Dr. Robertson, Manager, VA Hospital, Miles City, Montana.

DIRECTOR OF PSYCHIATRIC EDUCATION AND Extra-Mural Psychiatry—Diplomate; $15,000 plus family maintenance. W. C. Brinegar, MD, Mental Health Institute, Cherokee, Iowa. C

WANTED—RADIOLOGIST; 200 BED PRIVATE HOSpital; 100 bed VA Hospital; 2 clinics; no investment; no competition; excellent income. Manager, VA Hospital, Miles City, Montana. C

ANESTHESIOLOGIST—BOARD CERTIFIED OR ELIgible for private practice and teaching appointment; personal interview required. Box 4438 C, % AMA.

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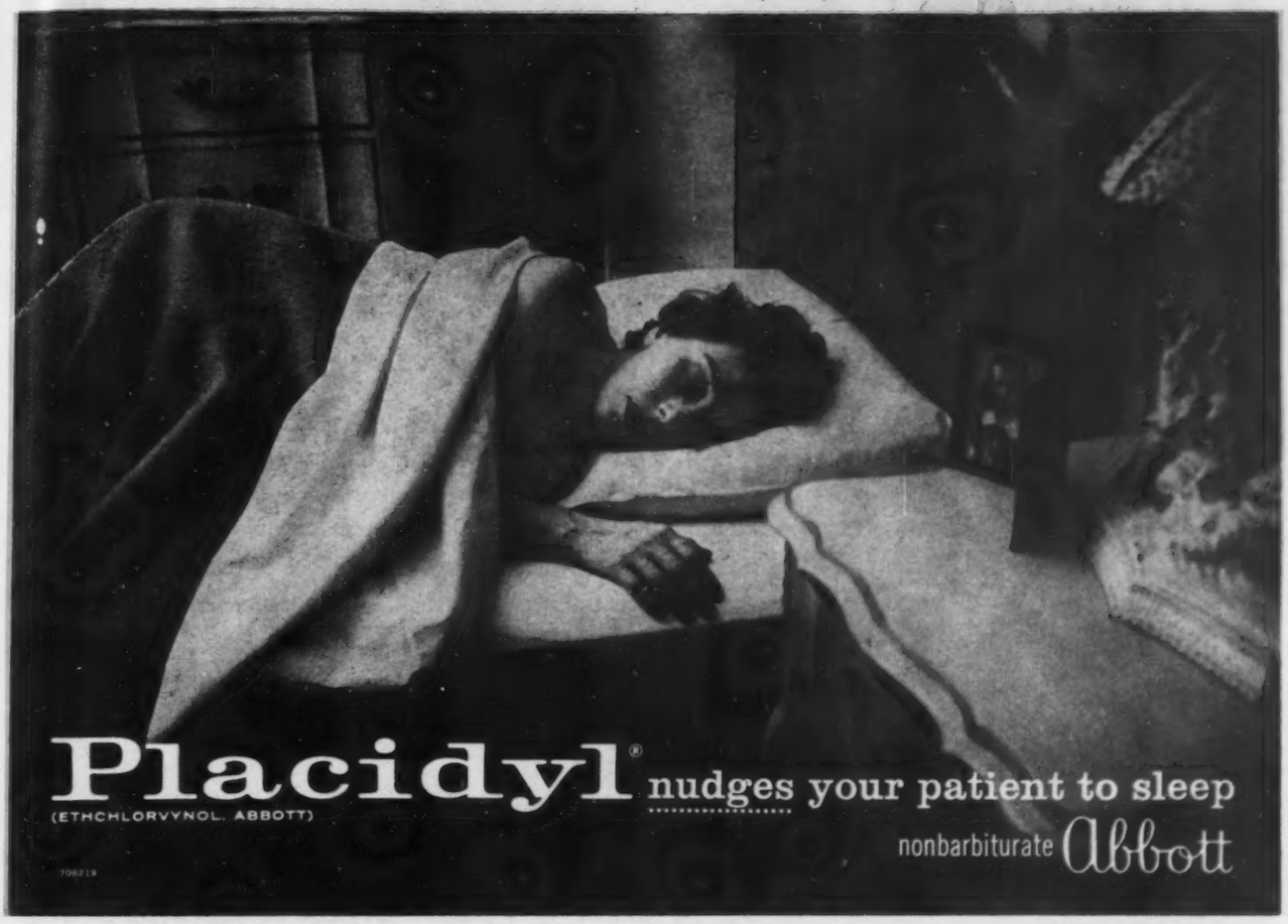

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(Continued from page 82)

GENERAL PRACTITIONER WANTED—IMMEDIATE opening; association with young general practitioner; starting salary $12,000 yearly; partnership later; location, Chicago suburb. Box 4469 C, % AMA.

WANTED—OTOLARYNGOLOGIST; BOARD ELIGIBLE as associate; suburban Philadelphia; salary leading to partnership; personal and professional data requested in first letter. Box 4525 C, % AMA.

INTERNIST AND OPHTHALMOLOGIST — UNDER thirty five; Board certified or Board eligible with established eight man group in Florida. Write: Box 4533 C, % AMA.

WANTED — ORTHOPAEDIC SURGEON TO WORK with Board man; must have orthopaedic Boards or Board eligible; located north central Illinois; excellent opportunity. Box 4546 C, % AMA.

FULL PARTNER WANTED—FOR FOUR MAN GROUP, established ten years, to do general surgery and some general practice; fully equipped office, local hospital, rural community, New York state. Box 4541 C, % AMA.

ORTHOPEDIST WANTED—IN A BUILDING WITH three other doctors; pleasant new air conditioned building located 85 miles from San Francisco in a rapidly growing area. Box 4539 C, % AMA.

WANTED—YOUNG GENERAL PRACTITIONER FOR associate in well equipped clinic; excellent hospitals in Springfield; $12,000 first year, full partnership in 4 years. Auburn Clinic, Auburn, Illinois. C

INTERNS AND RESIDENTS WANTED

The * signifies a hospital approved for internships and the + approved for residencies in specialties by the Council on Medical Education and Hospitals of the A. M. A. Consult Council's approved list for types of internships and residencies approved.

APPROVED RESIDENCIES AVAILABLE—1005 BED G.M.&S. Veterans Administration Hospital+ affiliated with Albany Medical College; opportunities for clinical, investigative and student teaching activities; U. S. citizenship required; applications invited for Pathology, Neurology, Physical Medicine and Psychiatry; salary $2840 to $3550; temporary license in New York State acceptable for first year but permanent license in any state required before entering second year. Career residencies available in Psychiatry, Neurology and Physical Medicine; salary $7570 to $8990; age limit 47 years and permanent license in any state required; eligible Korean G. I. trainees may receive their allotments in addition to hospital salary; bachelor quarters available for reasonable remuneration. Address inquiries to: Director, Professional Services, VA Hospital, Albany, New York. D

APPROVED RESIDENCIES AND ROTATING INTERN ships in 430 bed hospital*+; approved for four years general surgery; four years in pathology; three years medicine; three years in urology; three years in ob stetrics-Gynecology; three years in radiology; and years in anesthesiology; rotating internship is for months and includes medicine, surgery, obstetrics, pediatrics and 2 months specialty in intern's choice; acc training program, full time director of medical educa tion; remuneration $200 to $275 per month plus maintenance. For further information write: Director Medical Education, Huron Road Hospital, Cleve 12, Ohio.

RESIDENCIES IN OPHTHALMOLOGY — THE DE partment of Ophthalmology of the Royal Victoria Hos pital, Montreal, offers approved residencies of thre years' duration; clinical and didactic instruction in al phases of Ophthalmology; previous rotation service aft graduation from approved medical school required; ap pointments available to commence July 1, 1958; hono rarium and maintenance. For information: Apply to th Executive Director, Royal Victoria Hospital, Montre 2, Canada.

INTERNAL MEDICINE, SURGERY, PATHOLOGY AN chest diseases—in 500 bed Veterans Administration hos pital in Albuquerque, New Mexico; delightful all yea climate; outstanding teaching program under medica school with affiliation for necessary female and pediatri training; citizenship required; housekeeping facilitie available at modest cost. Contact: Director, Professiona Services, V.A. Hospital+, Albuquerque, New Mexico or Dean, University of Colorado Medical School, Denve Colorado. D

RESIDENCIES—MENNINGER SCHOOL OF PSYCHIA try+; approved three year program; balanced clinica and didactic training including psychotherapy and so matic therapies, out patient and child psychiatry; a VA, State and Menninger Hospitals; affiliated wit Topeka Institute for Psychoanalysis; five year appoint ments combining residency and staff experience fo Board eligibility available at staff salaries. Write: Reg istrar, Menninger School of Psychiatry+, Topeka, Kan sas. D

RESIDENCY IN RADIOLOGY AVAILABLE — LARGE active service fully approved for 3 years of training in all phases of diagnostic and therapeutic radiology in cluding radioactive isotopes; staff includes physicist and 2 radiologists with extensive teaching experience; full maintenance and liberal stipend. Apply: Methodist Hospital of Brooklyn, 503 Sixth Street, Brooklyn 15, New York. D

HOSPITAL IN NOME, ALASKA, SPONSORED BY Woman's Division of Christian Service of the Board of Missions of the Methodist Church in immediate need of medical director able to do surgery; this is the only one-doctor hospital fully accredited by Joint Committee on Hospital Accreditation. If interested apply to: Miss Emma Burris, 150 Fifth Avenue, New York 11, New York. D

PSYCHIATRIC RESIDENCY — NEW YORK CITY area; two year accredited program; Inpatient program of intensive analytically oriented psychotherapy; small case load; much personal supervision from psychoanalysts; outpatient clinic work with children and adults; clinical neurology; easy commuting to the city; $5000 per annum. Write: Alexander Grainick, MD, Director, High Point Hospital, Port Chester, New York. D

GENERAL PRACTICE RESIDENCY OPEN IMMEDIately; 225 bed General Hospital, Central California; excellent experience and opportunity to do general surgery; good working conditions; 15 day paid vacation and holidays; salary $700 per month; housing furnished; citizenship and California Board are necessary. Kings County General Hospital, Hanford, California. D

INTERNAL MEDICINE RESIDENCY; BOARD APproved three years includes all subspecialties and research under supervision of Board Certified specialists; affiliated with Hartford Hospital; stipend $2840 to $3550 per annum; housekeeping quarters available on hospital grounds; citizenship required. Apply: Manager, VA Hospital, Newington, Connecticut. D

GASTROENTEROLOGY—APPROVED RESIDENCY; 67 in-patient service; affiliation with Western Reserve University; stipend $3550 year; applicant must be U. S. citizen with one year approved residency in Internal Medicine; available immediately. Apply: Director, Professional Services, Veterans Administration Hospital+, Cleveland, Ohio. D

THIRD YEAR SURGICAL RESIDENCY IN FOUR year approved program; available to graduate of approved school; $325 monthly, married; $275, single; full maintenance provided; 441 bed accredited general hospital; air-conditioned surgery. Apply: John M. Willis, MD, Director, Hamot Hospital, Erie, Pennsylvania. D

WANTED — TWO YOUNG SINGLE DOCTORS FOR postion as resident physician; one in our hospital at Waycross, Georgia, and one for our hospital at Rocky Mount, North Carolina; salary $600 per month and maintenance. Contact: J. C. Bunten, MD, Chief Surgeon, Atlantic Coast Line Railroad, Wilmington, North Carolina. D

WANTED—SURGICAL RESIDENT; ONE YEAR OR longer; 100 bed general hospital; Virginia's Eastern shore; access fishing, swimming, boating; good working conditions; friendly atmosphere; $300 per month. Apply: Box 4570 D, % AMA.

ANESTHESIA RESIDENCIES—UNIVERSITY OF VERmont; two associated hospitals*+; active research program available; $2,000 annually. John Abajian, Jr., MD, Professor of Anesthesiology, University of Vermont, College of Medicine, Burlington, Vermont. D

RESIDENCY AT THIRD OR FOURTH YEAR LEVEL available immediately; salary open in line with ability; $6000 minimum; residency approved for four years training. Apply: Dr. A. J. Rawson, Norfolk General Hospital*+, Norfolk, Virginia. D

GENERAL RESIDENT TRAINING PROGRAM—$650 monthly stipend; one or two years; hospital accredited; training approved; 100 beds; active; no tubercular, no geriatrics. Write: Medical Director, Tulare County Hospital, Tulare, California. D

PEDIATRIC RESIDENCY — 1, 2, OR 3 YEARS APproved Jefferson Hospital*+, Pediatric Department, 1025 Walnut Street, Philadelphia 7, Pennsylvania. D

(Continued on page 88)

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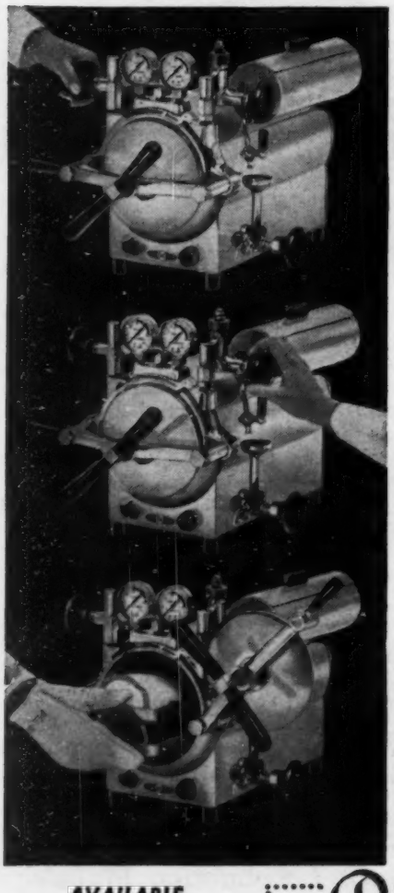

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(Continued from page 86)

INTERNSHIPS—AMA AND ACS APPROVED ROTATing services; 175 bed general hospital*; excellent educational programs, seminars, clinics and conferences; all services; teaching staff; wonderful opportunity; salary $100 month; full maintenance. Walther Memorial Hospital, Chicago 51, Illinois. D

WANTED — ASSISTANT RESIDENT IN SURGERY; three year approved program; active mid-west and hospital; closed staff; adequate stipend. Box 4427 D, % AMA.

RESIDENTS — OTOLARYNGOLOGY; FORTY FIVE bed; fully approved by the AMA Council on Medical Education. The Harlem Eye and Ear Hospital, 2099 Lexington Avenue, New York City 35. D

ANESTHESIOLOGY RESIDENCY — COMPLETE PROgram; approved by American Board; starting time individually arranged. Apply: Jay Jacoby, MD, Ohio State University, Columbus 10, Ohio. D

RESIDENT WANTED — GENERAL PRACTICE; 150 bed new hospital; 30 miles from New York City. Box 4571 D, % AMA.

RADIOLOGY RESIDENT — FULLY APPROVED; 3 years; 350 bed general hospital*+ with university affiliation. Box 4575 D, % AMA.

APPROVED RESIDENCIES IN MEDICINE, PATHological Anatomy, Psychiatry, Neurology and Pulmonary Diseases—Available January 1 and July 1, 1958; exceptional educational opportunity; 684 bed county hospital*+ near New York City; only applicants who have completed one year approved internship in U. S. will be considered; stipend $200 monthly plus complete maintenance. Apply: Superintendent, Bergen Pines County Hospital, Paramus, New Jersey. D

SURGICAL PATHOLOGY—NOW ACCEPTING APPLIcations for clinical fellowship sponsored by the American Cancer Society; one year appointment fully approved commencing July 1st, 1958; over 10,000 surgicals annually; one year prior to training in anatomic pathology required; candidates must be graduates of class A medical schools and citizens of U. S.; $3,600 tax exempt stipend. Write: Saul Kay, MD, Medical College of Virginia, Richmond, Virginia. D

PSYCHIATRIC RESIDENCY VACANCIES—APPROVED three year residency in conjunction with Northwestern University Medical School; extensive training program in clinical psychology; vocational counseling; social service; and related fields; salary ranges from $2840-$3550; and for career residents $7570-$10,065; hourly commuting distance Chicago; citizenship required. Write: Manager, Veterans Administration Hospital, Downey, Illinois. D

RESIDENCIES IN ADULT AND CHILD PSYCHIATRY —Accredited training programs for 3, 4 and 5 years are available for residents at the Layfayette Clinic, Detroit, Michigan, beginning July 1, 1958; the Layfayette clinic is a training and research psychiatric hospital affiliated with Wayne State University. For information write: J. S. Gottlieb, MD, Director, Layfayette Clinic, 951 East Lafayette, Detroit 7, Michigan. D

SURGICAL RESIDENCY—AVAILABLE IMMEDIATEly and July 1, 1958 684 bed county hospital*+ near New York City; exceptional educational opportunity; only applicants who have completed one year approved internship in U.S. will be considered; stipend $200 monthly plus complete maintenance. Apply: Superintendent, Bergen Pines County Hospital, Paramus, New Jersey. D

PATHOLOGY RESIDENTS — 500 BED GENERAL medicine and surgery Veterans Administration Hospital; 4 years approval for anatomical and clinical pathology; active training program supervised by Deans Committee; salary range $2840 to $4000; quarters available; address letter of inquiry to: Manager, Veterans Administration West Side Hospital, 820 South Damen Avenue, Chicago 12, Illinois. D

INTERNS AND RESIDENTS WANTED — MEDICINE; 3 year residency; 400 bed teaching hospital and large outpatient clinic; affiliated with medical school; appointment available immediately; starting stipend $125; full maintenance; Apply: Dr. Hyman Zimmerman, Chairman, Dept. of Medicine, Mount Sinai Hospital*+, 2750 W. 15th Place, Chicago 8, Illinois. D

TWO YEAR APPROVED PEDIATRIC RESIDENCY — northern California; organized teaching program with eight full time Board pediatricians; appointments available immediately and throughout year; California license eligibility required; salary $315-$390. Contact: Alexander King, MD, Chief, Pediatrics Department, Kaiser Foundation Hospital, Oakland 11, California.

EYE RESIDENCY AVAILABLE IN 650 BED NEW York city hospital—This is an active surgical eye service with unusual opportunity for training in neuro-ophthalmology and eye pathology, in addition to usual eye material. Write: Samuel Gartner, MD, Montefiore Hospital, 210 Street and Bainbridge Avenue, New York 67, N. Y. D

WANTED—THREE RESIDENTS AND TWO SENIOR anesthesiologists in rapidly growing approved University Department of Anesthesia; interested candidates from grade A medical schools with standard credentials write: Dr. Robert A. Hingson, Director Department of Anesthesia, University Hospitals of Cleveland, 2065 Adelbert Road, Cleveland 6, Ohio for details. D

APPROVED ROTATING INTERNSHIPS—ONE YEAR internship January 1 and July 1, 1958; 684 bed county hospital*+ near New York City; exceptional educational opportunity; only applicants of approved medical schools will be considered; stipend $190 monthly plus complete maintenance. Apply: Bergen Pines County Hospital, Paramus, New Jersey. D

PATHOLOGY RESIDENCY—DETROIT; VACANCY IMmediately; approved for 4 years in both anatomical and clinical pathology; 635 bed general non-profit hospital*+; 300 autopsies and 7,000 surgicals per year; 3 full time Board certified pathologists; program includes affiliation with local College of Medicine. Box 4490 D, % AMA.

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Chairman, Intern Committee D

APPROVED RESIDENCY IN OBSTETRICS AND Gynecology—Beginning stipend $200 with full maintenance and uniforms; we are now taking applications for position available immediately; and another opening November 1, 1957; write: Administrator, Hollywood Presbyterian Hospital, Olmstead Memorial, 1522 North Vermont Avenue, Los Angeles 27, California. D

INTERNAL MEDICINE RESIDENCY—APPROVED three year productive teaching program; modern medical center for 115,000 members; 20 full time internists; stipend $3780-$4980 with total family medical care; 4th year status to $6840. Contact: C. C. Herbert, MD, Kaiser Foundation Hospital, 2425 Geary Blvd., San Francisco, California. D

RESIDENTS—IMMEDIATE VACANCY; GENERAL ROtating residency in well equipped 174 bed hospital, located in attractive mountain, seaside resort city; U. S. citizenship; 1 year internship and eligibility for California license required; salary $560 per month. Apply to: Director, County Hospital, Santa Cruz, California. D

INTERNS AND RESIDENTS WANTED — SURGERY, four year residency; 400 bed teaching hospital*+ and large outpatient clinic affiliated with medical school; appointment available immediately; starting stipend $125; full maintenance. Apply: Director, Mount Sinai Hospital, Chicago 8, Illinois. D

RESIDENCY IN INTERNAL MEDICINE AVAILABLE—250 bed general hospital*+ with large clinic and comprehensive teaching program; 3 year approval; excellent opportunity for teaching and subsequent practice; California licensees only. Contact: Mr. Joseph Zem, 1580 Valencia Street, San Francisco 10, California. D

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MEDICAL RESIDENT—LARGE GENERAL HOSPITAL located in medical center in South; education program majority of specialties; current vacancy is medicine; fully approved residency. Administrator, St. Joseph Hospital, Memphis 5, Tennessee. D

PATHOLOGY RESIDENCY—UNEXPECTED OPENING in pathologic anatomy and surgical pathology, available now; salary and maintenance. Address inquiries to: M. N. Richter, MD, Director of Pathology, University Hospital, 303 East 20th Street, New York 3, N. Y. D

PATHOLOGY RESIDENCIES—AVAILABLE JULY 1 IN medical and surgical hospital*+; approved in anatomic and clinical pathology; active surgical pathology and autopsy services. Apply: Director of Laboratory, Carney Hospital, Boston, Mass. D

RADIOLOGY RESIDENT—2ND OR 3RD YEAR; APproved program under two certified men; applicants must be graduates of U. S. medical school; $500.00 month plus maintenance; send curriculum vitae. Box 4560 D, % AMA.

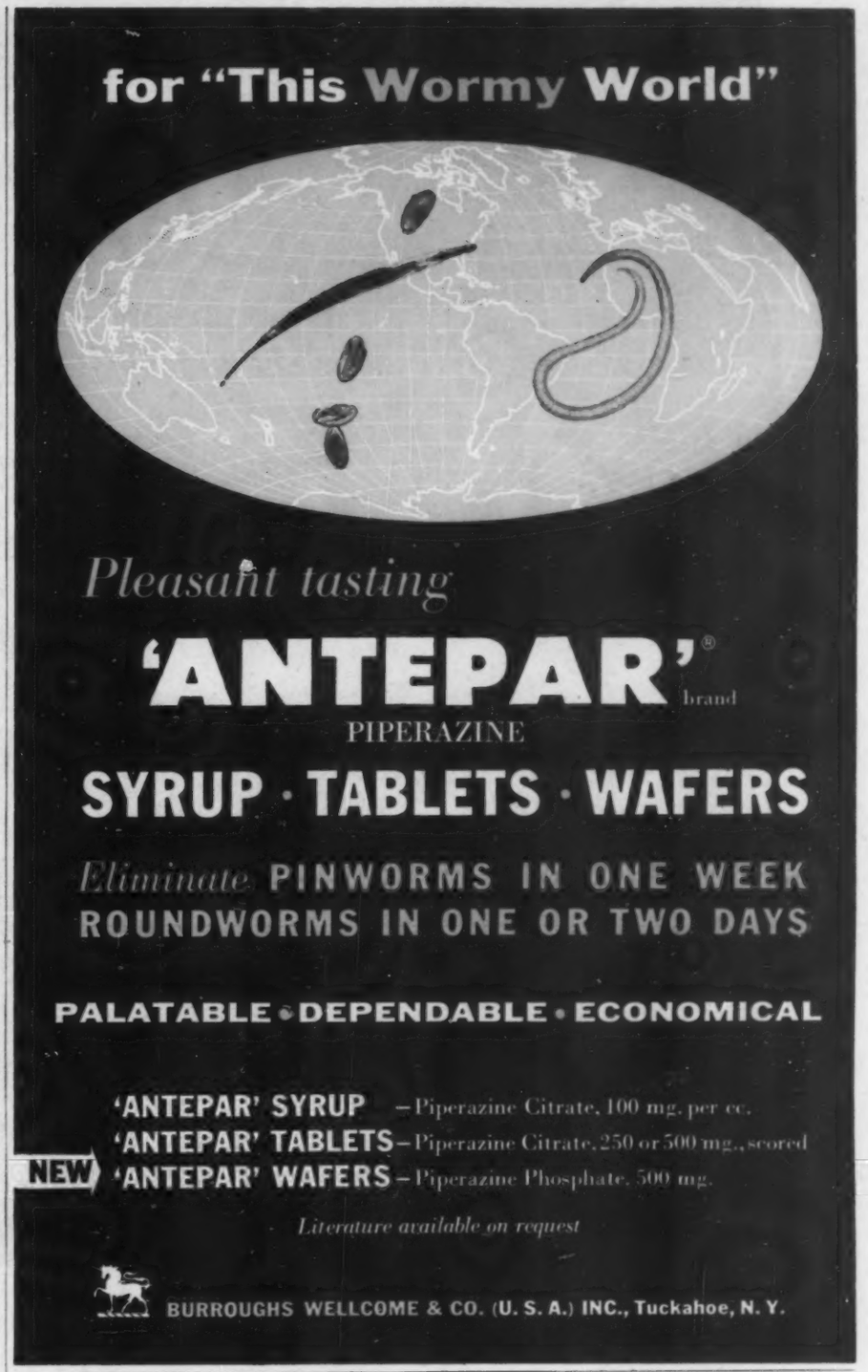
FULLY APPROVED OPHTHALMOLOGY RESIDENCY —Charity Hospital, New Orleans, Louisiana, in association with Louisiana State University School of Medicine. Write: George M. Haik, MD, 812 Maison Blanche Building, New Orleans, Louisiana. D

ASSISTANT RESIDENCY IN SURGERY—AVAILABLE due to expansion of program; consideration will be given only to graduates of acceptable medical schools; beginning stipend $150 per month and maintenance. Box 4487 D, % AMA.

POSITIONS OPEN—GENERAL PRACTICE RESIDENcy; 220 bed hospital; plenty of surgery; foreign graduates now being considered; for salary and other information contact: Dr. Henry E. Jones, E. A. Conway Memorial Hospital, Monroe, La. D

WANTED—RESIDENTS IN PSYCHIATRY; 3 YEAR approved residencies available; large eastern mental hospital+; excellent teaching program therapeutic procedures; $5,280-$6,600. Box 4488 D, % AMA.

WANTED — RESIDENT IN INTERNAL MEDICINE; mid-west clinic and hospital; closed staff; all attending men have Boards or are Board eligible; excellent working conditions. Box 4429 D, % AMA.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IMMEDIATE OPENING—IN APPROVED GENERAL practice residency program; contact: Administrator, Baptist Hospital, Pensacola, Florida. D

FOUR YEAR RESIDENCY—IN PATHOLOGICAL anatomy and clinical pathology with teaching and research training optional. Box 4442 D, % AMA.

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(Continued on page 96)

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References: **1.** Dinkel, R. M.: Eugenics Quart. 3:22 (Mar.) 1956. **2.** Grove, R. D.: Am. J. Pub. Health *46*:592 (May) 1956. **3.** College Study Report: Population Bulletin *11*:45 (June) 1955. **4.** Novak, E., and Novak, E. R.: Textbook of Gynecology, Baltimore, The Williams & Wilkins Company, 1956. **5.** Tietze, C.: Proc. 3rd Internat. Conf. Planned Parenthood, 1953.

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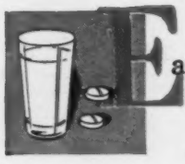

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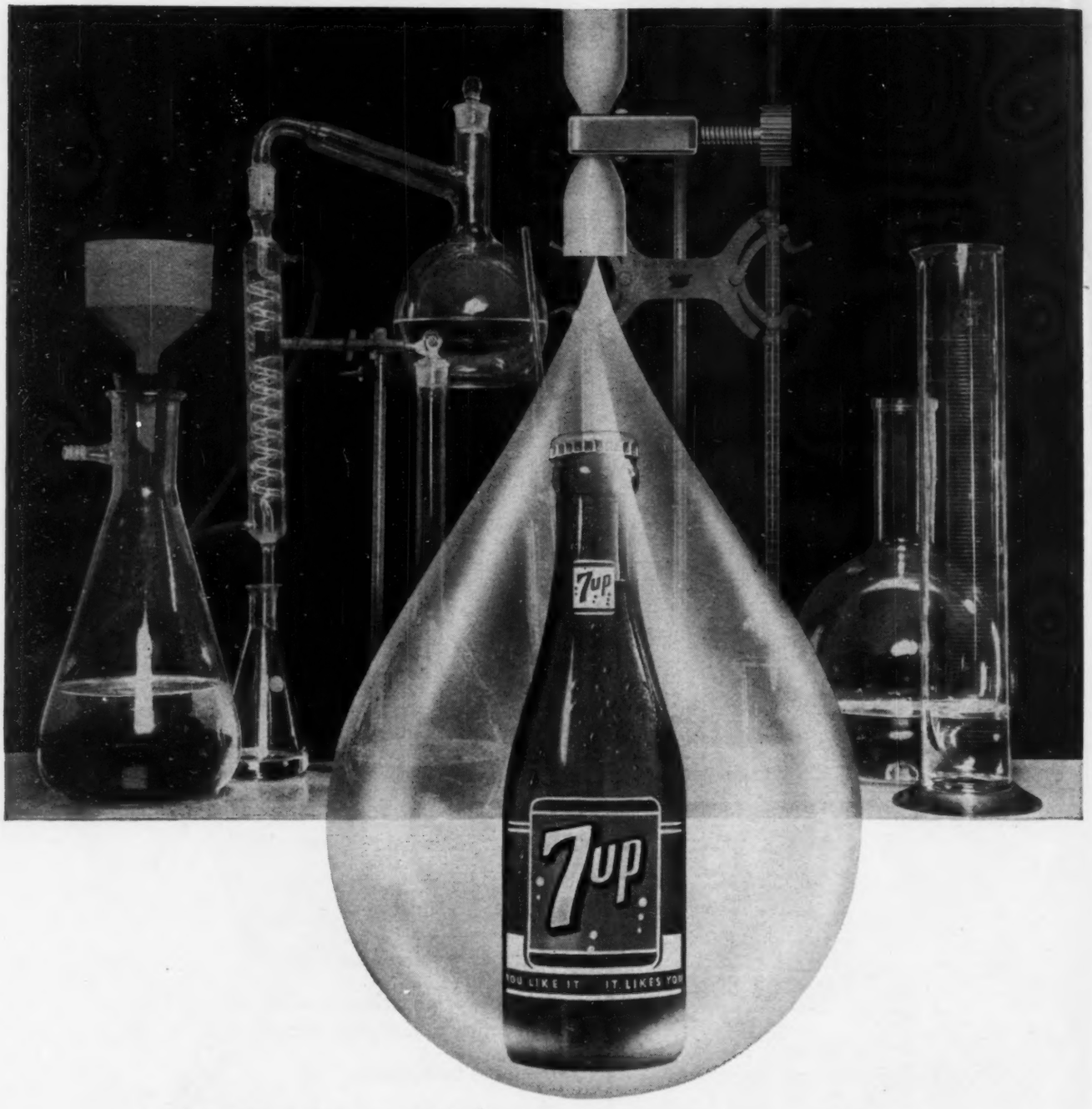

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(Continued from page 89)

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SURGEON — AMERICAN BOARD; 35, UNIVERSITY hospital trained with several years active practice; wishes to locate in Oregon or N. W. coastal region; desires association with another surgeon. Box 4567 I, % AMA.

GENERAL SURGEON — BOARD ELIGIBLE; DRAFT exempt; age 32; married; Scottish graduate; citizenship applied for; licensed in New York; willing to work as required; seeks location or partnership. Box 4594 I, % AMA.

CHEST PHYSICIAN—FCCP; OHIO AND NEW YORK licenses; now assistant medical director T.B. Sanatorium; seeks responsible position; also will consider part-time position permitting part-time private practice. Box 4595 I, % AMA.

RADIOLOGIST—GRADUATE JOHNS HOPKINS; FULL X-ray residency; Johns Hopkins Hospital; age 42; would like small hospital in or near New York City; available immediately. Box 4408 I, % AMA.

RADIOLOGIST—MIDDLE AGED; WIDOWER; BOARD Eligible; category IV; desires position in hospital or private practice; available immediately; licensed in Wisconsin and Rhode Island, Box 4583 I, % AMA.

INTERNIST—BOARD CERTIFIED; AGE 33; FAMILY; leaving military service; desire association with individual or group in Texas or West; extensive clinical isotope experience. Box 4586 I, % AMA.

GENERAL SURGEON—33; BOARD ELIGIBLE; MARried; university residency in general and pediatric survey; prefers northwestern or western location; clinic or hospital. Box 4587 I, % AMA.

GENERAL PRACTITIONER—DESIRES RELOCATION; Preferably high plains area of Texas; solo; partnership; or group practice considered; army service completed; present location eleven years. Box 4588 I, % AMA.

GENERAL SURGEON—31; FAMILY; BOARD ELIGIble; desires association with surgeon, group or private practice; New York or Illinois; no military obligation; available immediately. Box 4596 I, % AMA.

INTERNIST—THIRTY ONE, FAMILY, BOARD ELIGIble, university trained, subspecialty: cardiology; qualified diagnostic cardiac catheterization; desires group or hospital association; available January 1, 1958. Box 4396 I, % AMA.

AVAILABLE—AMERICAN BOARD SPECIALISTS TO head departments, join groups, etc.; physicians for private practice, assistants or associates, industry, public health. Please write for recommendations. Shay Medical Agency, 55 E. Washington, Chicago. I

RADIOLOGIST—DIPLOMATE; CHIEF DEPARTMENT past five years; age 40; 10 years in radiology; university trained; isotope license; desire private practice, group, or head department; midwest, south. Box 4501 I, % AMA.

NEUROSURGEON—37; BOARD QUALIFIED; JUST completed military obligation; desire association with eventual partnership or affiliation with established group; location open; prefer south or west; available immediately. Box 4552 I, % AMA.

NEUROSURGEON; 6 YEARS, GENERAL PRACTICE prior to obtaining university hospital training in neurosurgery; 4 years, neurosurgeon, well known group; Diplomate; Medical Bureau, Burneice Larson, Director, 900 North Michigan Avenue, Chicago. I

GENERAL PRACTITIONER WITH EMPHASIS ON pediatrics available August 15th to October 1st; for locum tenen or camp doctor; references furnished. Reply: Box 4544 I, % AMA.

GENERAL PRACTITIONER—MIDDLE AGED VETERan; wide experience; desires association with group or associate, or take over practice; no obstetrics. Box 4514 I, % AMA.

SURGEON—THIRTY EIGHT; CERTIFIED; F.A.C.S.; veteran; family; 7 years experience academic surgery and private practice; desires association with group or individual; prefer town 25-100,000. Box 4499 I, % AMA.

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WANTED — MEDICAL LABORATORY TECHNICIAN; research experience; blood chemistry and hematology; salary $4,525 annually, available immediately. Box 4593 L, % AMA.

WANTED — GENERAL MEDICAL TECHNICIAN (male) for employment with U. S. Government; under 38 years of age; must be U. S. citizen; military experience in medical field desirable; knowledge of X-ray and laboratory procedures necessary; willing to serve overseas; salary $4080 per annum plus allowances; request initial reply include professional background and military experience. Box 4069 L, % AMA.

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(Continued on page 100)

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1. Steinberg, H.: Ann. Allergy *13*:710 (Nov.-Dec.) 1955. 2. Sievers, J. J.: Ann. Allergy *14*:181 (March-April) 1956.

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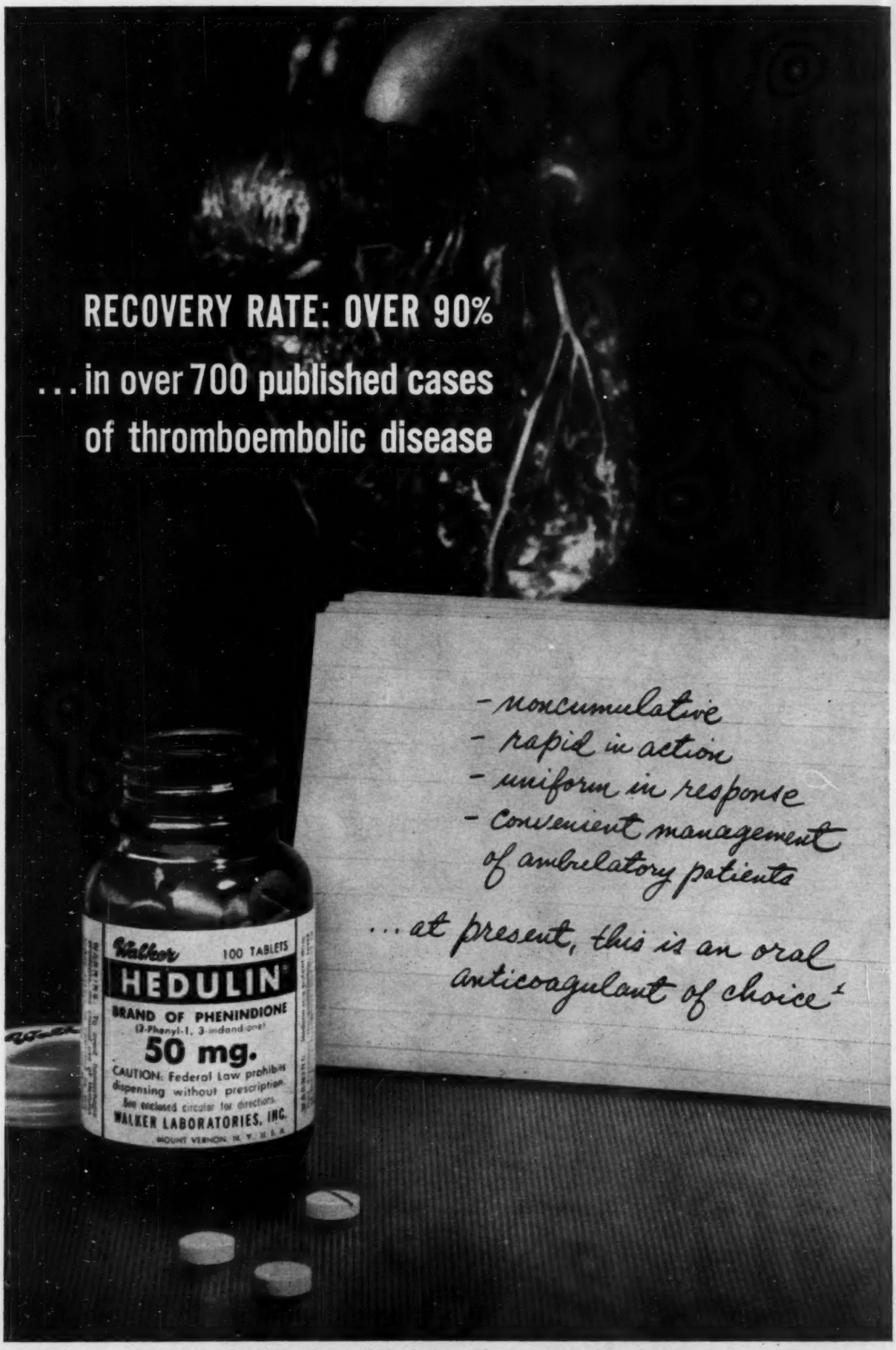

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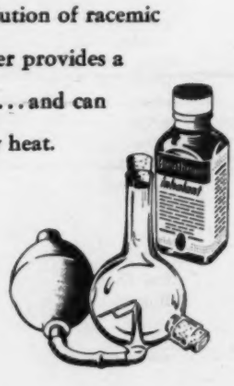

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CALIFORNIA — PEDIATRIC PRACTICE — ESTABlished six years; large, busy practice; town of 20,000; 30 minutes from Coast; 2 hours from San Francisco; owner returning to academic medicine; will introduce. Box 4597 P, % AMA.

CALIFORNIA — PRACTICE FOR SALE; COASTAL Garden Spot general practice grossing $50,000; hospital staff open; terms available to reliable party. Reply: Box 4527 P, % AMA.

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MASSACHUSETTS—LUCRATIVE INTERNAL MEDIcine and cardiology practice; greater Boston; open hospital; pay from income; no real estate; will introduce; relocating Florida. Write: Box 4498 P, % AMA.

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(Continued on page 104)

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Prednisolone-Hydroxyzine Combination [ATARAXOID] in Rheumatoid Arthritis

(excerpted from J. M. Soc. New Jersey 54:7, 1957)

PETER J. WARTER, M.D., *Trenton*

Dr. Warter concludes: "The effect of prednisolone on rheumatoid arthritis is enhanced by hydroxyzine, in many instances permitting a substantial reduction in the dosage of steroid . . . of 25 to 50 per cent."

* * *

The intimate correlation between anxiety states and rheumatoid exacerbations suggests that an ataractic agent might potentiate the action of steroids, or provide effective therapy for the emotional components of rheumatoid arthritis. . . . Accordingly, a study was developed to test the idea that combined steroid-ataraxic therapy [ATARAXOID] might be superior to therapy with steroids alone.

* * *

MATERIALS AND METHODS

A total of 6 men and 15 women were available for study. All but one had received steroids previously for rheumatoid arthritis. . . . All patients were started on a dosage of prednisolone equivalent to the amount of steroid they had formerly received: in most cases this was 15 or 20 milligrams of prednisolone daily, in divided doses. In addition, all patients received hydroxyzine [as ATARAXOID]

* * *

RESULTS

Of the 21 patients who completed the trial, it was possible in 12 to reduce the daily dosage of prednisolone when hydroxyzine was given concurrently. Two patients who had been receiving 15 milligrams of prednisolone were maintained on 5 milligrams when the steroid was supplemented by 10 milligrams of hydroxyzine. In eight others who had been receiving 10 to 15 milligrams of prednisolone, it was possible to reduce the steroid dosage by 5 or 7.5 milligrams. . . . Substantial clinical improvement was observed among most of the patients during this study, even among eight of those receiving reduced amounts of steroid. The table indicates the clinical status of the patients at the beginning of the study, and their evaluation after the period of therapy.

* * *

STATUS ON ATARAXOID

Patients	Previous Response Status	Steroid Dose	Clinical Response
1	Poor	R	Imp.
11	Fair	7-R 4-M	7-Imp. 1-Worse 3-N.C.
9	Good	4-R 5-M	6-Imp. 3-N.C.

R: Dose reduced / M: Dose maintained / Imp.: Clinically improved / N.C.: No clinical change.

Three had not been treated with steroids prior to this study. In four patients in the "Imp." group, the improvement was subjective or emotional only.

* * *

In general, the incidence and severity of adverse effects was lower on prednisolone-hydroxyzine therapy than on steroid therapy alone. . . . Therapy was discontinued in two patients because of side effects. In both these cases moderately large doses of steroids were involved.

* * *

SUMMARY

1. Ataraxoid (a combination of prednisolone and hydroxyzine) was used in the management of rheumatoid arthritis in patients whose response to steroids was well-known.

2. Using this combination it was possible to reduce substantially the maintenance dosage of prednisolone in 12 of 21 patients without sacrificing therapeutic effect in any case and with continued improvement in most of the patients.

3. Clinical improvement, reduction of steroid dosage, or both, was achieved in 18 of the 21 patients, and steroid side effects were generally diminished in intensity.

4. Therapy produced a tranquilizing effect in most patients that was not accompanied by drowsiness. In addition it was possible in many cases for the first time to gain the active cooperation of patients in the management of their disease.

This condensation has been prepared by the Medical Department of Pfizer Laboratories as a service to the Medical Profession.

(Continued from page 100)

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C I B A SUMMIT, N. J.

The Bright Side

by E. K. H.

"You say," sobbed Illyana Ninotchkoyava Ninaspkskyavitch, "my darling Ivan died in battle? Did he utter my name as he was dying?"

"Well, yes—part of it," replied the returned soldier.

❖

Herb Shriner was telling about a friend back in his home town:

"He was a kinda skinny and shy little fella, but he was determined to be somebody—he didn't care who."

❖

When comedian Cobett Monica arrived at the Fontainebleau Hotel in Miami Beach, he strolled up to the desk and asked for a room facing the ocean.

"Yes, sir," said the clerk. "We have a very nice one at $50 a day."

The comic staggered back. "Haven't you anything a little cheaper—say more like $10?"

"Yes, we have," the clerk sneered. "But at that price you have to make your own bed."

"Well," asks Monica, "what could I do? They gave me the room, and a hammer, and nails, and some boards."

❖

"This type of bullet," explained the instructor to the Army rookies who were ready to crawl over the assault course under fire, "will penetrate up to 8 in. of solid oak—so remember, men, keep your heads down!"

❖

A pretty blond starlet was being shown around the estate of a new and wealthy admirer. As they entered one of his greenhouses, she paused to admire a lovely plant.

"This beauty," explained her host, "belongs to the Begonia family."

"Oh," gushed the actress, "and you're looking after it while they're away?"

❖

"Betty, darling," said the embarrassed young lover, "before we get married there's something I must get off my chest."

"Of course, dearest," said the girl, sympathetically. "What is it?"

The young lover tore open his shirt, exposing a large, magnificently tattooed declaration:

"I love Alice."

❖

"Well, my friend," beamed the psychiatrist, "I think we've got your kleptomania under control now."

The woman smiled gratefully and got up to leave.

"However," said the doctor, "if you *do* have a relapse, pick up one of those little transistor radios for me, will you?"

We like this one about a Scotsman who absolutely refused to pay the bus conductor the new rate of 15 cents for his usual 10 cent ride.

The bus had just reached the center of a bridge when the infuriated conductor grabbed the Scot's suitcase and hurled it into the water.

"Ah hah! You scoundrel!" shouted Sandy. "First you try to rob me—and now you drown me little boy!"

❖

At a Parent-Teacher Association meeting in a midwestern town, they were discussing the poor quality of milk the children got in school.

"What this town needs," shouted one mother indignantly, "is clean, fresh, pasteurized milk—and we must take the bull by the horns and *demand* it."

❖

A Phil Silvers' favorite concerns the time he and a friend were leaving a Hollywood hotel one dark, foggy night.

Phil soon realized they were being followed by two dim figures who appeared to be closing in on them.

"George," whispered the quick-thinking comic to his companion, "this looks like trouble. You take the big guy. I'll handle the little guy—the one with the *knife!*"

❖

The blessed event seemed imminent and the father and mother concerned packed a bag quickly, gave some last minute instructions to the maid, and kissed their small son good-by.

As they dashed for the car, the little boy rushed out to the porch.

"Hey, mummy," he called anxiously, "what shall I do if the stork comes while you're away?"

"My wife used to call me, 'tall, dark and handsome' — now she calls me 'high, wide and handsome.'"

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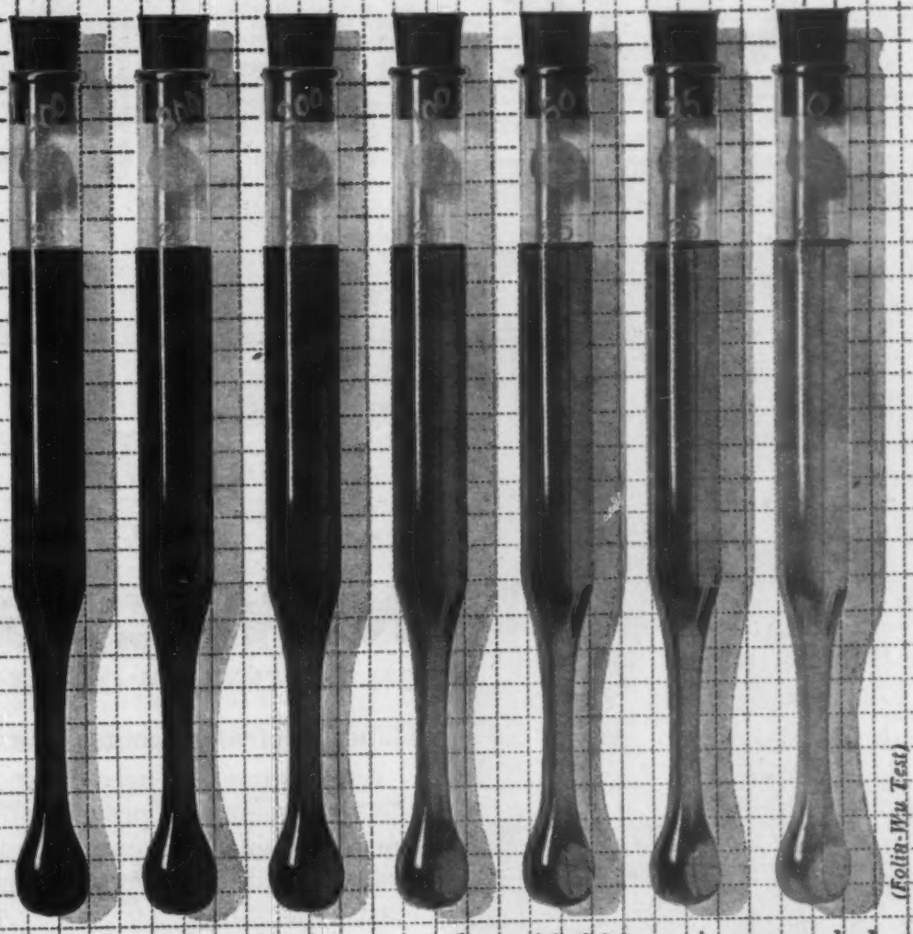

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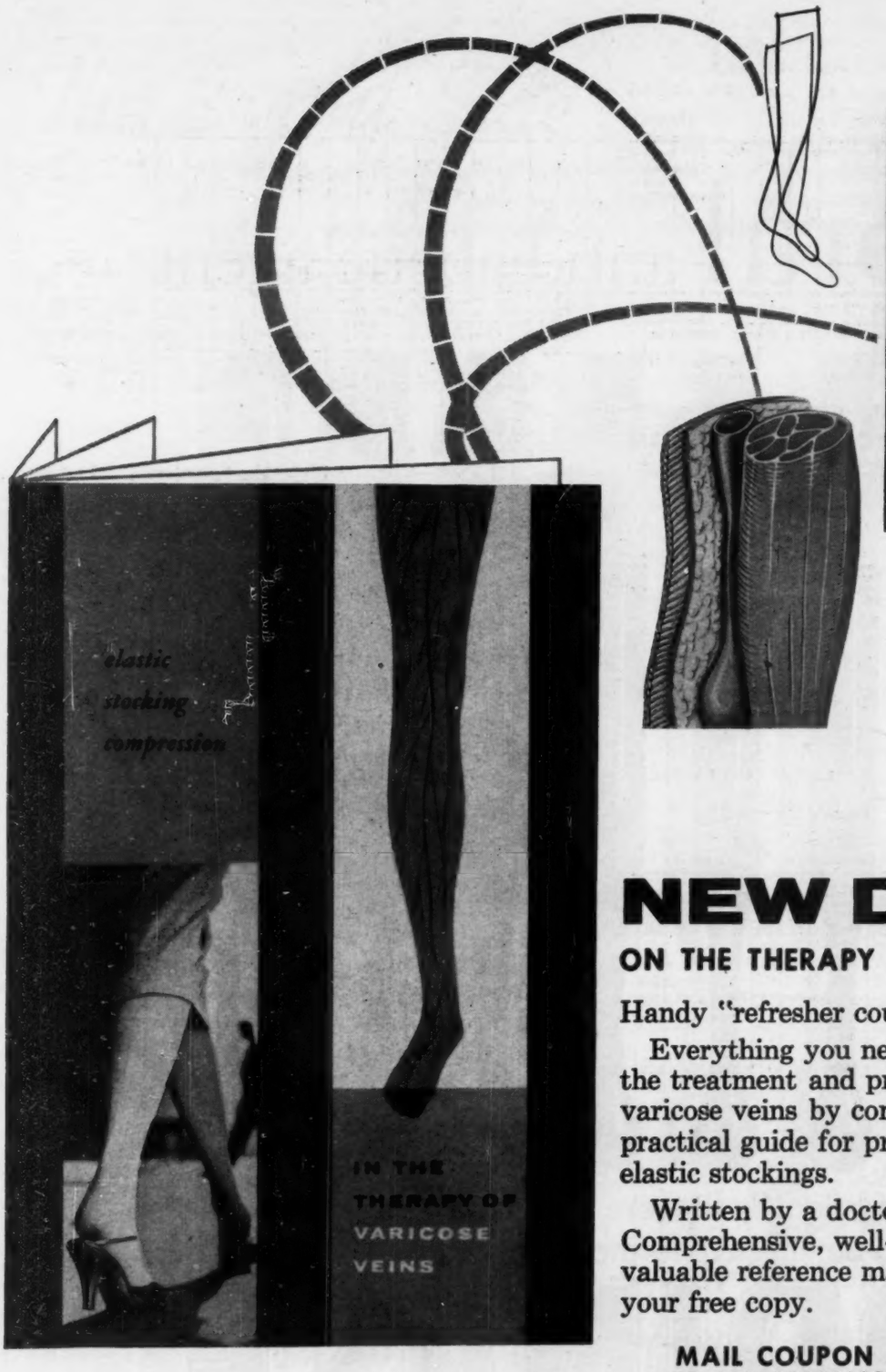

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Since nonfat dry milk is one of the richest, most economical food sources of high-quality protein available, it is ideally suited for diets where protein-fortification of foods and beverages is indicated.

And since reconstituted *Instant* Pet is delicious nonfat milk with all the protein, calcium and B-vitamins of whole milk, but only half the calories . . .

it is a pleasant and valuable addition to any diet which needs to be high in protein and calcium . . . low in fat and calories. Also significant to the patient is *Instant* Pet's modest cost—as little as 8¢ a quart.

INSTANT PET NONFAT DRY MILK

supplies essential milk nourishment with minimum caloric intake at minimum cost

PET MILK COMPANY • ARCADE BUILDING • ST. LOUIS 1, MISSOURI

in hay fever

Novahistine®

gives greater relief than antihistamines alone

...and avoids misuse of topical agents

Novahistine taken *orally*
checks excessive irritant secretions
and "unlocks" the closed-up nose

In the management of hay fever and other seasonal allergies...as well as the common cold...the distinctly additive action of a vasoconstrictor (phenylephrine HCl) combined with an antihistaminic drug (prophenpyridamine) produces a higher degree of relief than either drug given alone.

...*eliminates patient misuse* of nose drops, sprays and inhalants...is not likely to produce rebound congestion, mucosal damage, and ciliary paralysis, nor make the patient "jittery."

Each Novahistine Tablet or teaspoonful of Elixir provides 5.0 mg. of phenylephrine HCl and 12.5 mg. of prophenpyridamine maleate. For more potent nasal decongestion, Novahistine *Fortis* Capsules provide twice the amount of phenylephrine.

Pitman-Moore Company • *Division of Allied Laboratories, Inc.,* **Indianapolis 6, Indiana**

especially valuable in older patients

the Colace Products Family

for the management of constipation

when bowel motility is adequate

Colace | Capsules, Syrup, Liquid (drops)

dioctyl sodium sulfosuccinate, Mead Johnson

softens stools without laxative action

when bowel motility is inadequate

new **Peri-Colace** | Capsules, Syrup

Colace and anthraquinone derivatives of cascara, Mead Johnson

softens stools and stimulates peristalsis

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